

1. This is a civil administrative action instituted pursuant to Section 3008(a)(1) of the Resource Conservation and Recovery Act of 1976, as amended (RCRA), 42 U.S.C. §6928(a)(1), and 40 CFR Sections 22.01(a), 22.13, and 22.37 of the United States Environmental Protection Agency's Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and the Revocation or Suspension of Permits.
2. The Complainant is, by lawful delegation, the Associate Director, Office of RCRA, Waste Management Division, Region 5, United States Environmental Protection Agency (U.S. EPA).
3. The Respondent is Hoosier Spline Broach Corporation, which is and was at all times relevant to this complaint, the owner and operator of a facility located at 1401 Touhy Pike, Kokomo, Indiana 46903.



4. The Respondent, Hoosier Spline Broach Corporation, is a person, as defined by Section 1004(15) of RCRA, 42 U.S.C. §6903(15) and 329 Indiana Administrative Code (IAC) §3-1-7/320 IAC 4.1-1-7 and 40 CFR §260.10, who owns and operates a facility that generates, treats, stores, or disposes of hazardous waste.
5. Respondent is an Indiana corporation whose registered agent in Indiana is Mr. Gilbert Larison, Hoosier Spline Broach Corporation, 1401 Touhy Pike, P. O. Box 538, Kokomo, Indiana 46903.
6. On January 31, 1986, the State of Indiana was granted Final Authorization by the Administrator of U.S. EPA pursuant to Section 3006(b) of RCRA, 42 U.S.C. §6926(b), to administer a hazardous waste program in lieu of the Federal program. See 51 **Federal Register** 3953 (1986). A revision to the authorized program was authorized effective September 23, 1991. See 56 **Federal Register** 33866 (1991). Sections 3006(b) and 3008(a) of RCRA, 42 U.S.C. §6926(b) and §6928(a), respectively, provide that U.S. EPA may enforce State regulations in lieu of Federal regulations in those States authorized to administer a hazardous waste program.
7. Section 3006(g) of RCRA, 42 U.S.C. §6926(g) authorizes the U.S. EPA to enforce Federal requirements or prohibitions applicable to the generation, transportation, treatment, storage, or disposal of hazardous waste, which are imposed pursuant to the Hazardous and Solid Waste Amendments of 1984 (HWSA) in authorized States.



8. U.S. EPA has provided notice to the State of Indiana concerning this complaint pursuant to Section 3008(a)(2), 42 U.S.C. §6928(a)(2).
9. Any violation of regulations promulgated pursuant to Subtitle C, §§ 3001-3019 of RCRA, 42 U.S.C. §§ 6921-6039(b), or any state provision approved pursuant to §3006 of RCRA, 42 U.S.C. §6926, constitutes a violation of RCRA, subject to the assessment of civil or criminal penalties and compliance orders as provided in §3008 of RCRA, 42 U.S.C. 6928.
10. Pursuant to 40 CFR §261.24(a), a solid waste exhibits the characteristic of toxicity if, using the test methods described in Appendix II in 40 CFR Part 261 (the Toxicity Characteristic Leaching Procedure (TCLP)) or equivalent methods approved by the Administrator under the procedures set forth in 40 CFR §§260.20 and 260.21, the extract from a representative sample of the waste contains chromium concentrations at or greater than 5.0 mg/l. Such waste is assigned the EPA hazardous waste number D007.
11. Continuously from February 1990 to February 22, 1992, Respondent discarded its grinding baghouse dust in a waste pile at the facility.
12. On February 21, 1992, the IDEM conducted a RCRA Compliance inspection at Hoosier Spline Broach Corporation located at 1401 Touhy Pike, Kokomo, Indiana. During the inspection the IDEM inspector noted releases of waste from the waste pile by the presence of rill erosion on the waste pile and discoloration of soils in the vicinity of the waste pile.



13. From September 29, 1990 to February 22, 1992, the Respondent placed grinding baghouse dust waste in a waste pile at an approximate rate of 125 cubic yards per year.
14. On or about February 22, 1992, the Respondent placed the waste from the pile into 85 55-gallon drums.
15. On or about March 9, 1992, the Respondent submitted a RCRA §3010 notification and obtained a EPA identification number for the facility to and from U.S. EPA.
16. On or about May 29, 1992, the Respondent shipped approximately 40 cubic yards of waste to the hazardous waste to the CWM/CID Landfill in Calumet City, Illinois, for disposal. Hazardous waste manifests IL3685368 and IL3846747 accompanied the waste.

COUNT ONE

17. The allegations of paragraphs 1-16 of the Complaint are incorporated by reference as though set forth here in full.
18. Continuously from February 1990 to the present, the Respondent generated grinding baghouse dust in the manufacturing of spline broaches for the automotive industry at the facility.
19. On or about November 7, 1991, the Respondent submitted TCLP analytical data for the grinding baghouse dust to the IDEM's Special Waste Section for a Special Waste Certification Application.
20. The IDEM's analysis of the analytical data concluded that the waste



exhibits the toxicity characteristic because the chromium concentration in the TCLP extract exceeded 5.0 mg/l.

21. On or about January 9, 1992, the IDEM notified Mr. Gilbert Larison of Hoosier Spline Broach Corporation, via letter that approval for disposal of grinding sludge as Special Waste was denied. The denial was based on the analysis of chromium submitted with the application which shows the sludge exhibited the hazardous waste characteristic of toxicity (EPA hazardous waste number D007) according to 40 CFR §261.24.
22. Respondent is a generator of a solid waste, and thus required to make a hazardous waste determination as described in 40 CFR §262.11 at the time the waste is generated.
23. Respondent failed to make a timely hazardous waste determination with respect to the grinding baghouse dust on or before September 29, 1990, and in fact did not make the hazardous waste determination until November 7, 1991.
24. This failure to timely make the hazardous waste determination constitutes a violation of 40 CFR §262.11 from September 29, 1990 to November 7, 1991.
25. On March 29, 1990, the U.S. EPA promulgated the Toxicity Characteristics (TC) rule to revise the existing Extraction Procedure toxicity characteristic, which is used to identify those wastes which are hazardous and thus subject to regulation under Subtitle C of RCRA. The rule broadened and refined the scope of the hazardous waste regulatory



program and fulfilled specific statutory mandates under the Hazardous and Solid Waste Amendments of 1984.

26. Section 3010 of RCRA, 42 U.S.C. §6930(a), requires any person owning or operating a facility for treatment, storage, or disposal of any hazardous waste identified in 40 CFR Part 261 to notify the Regional Administrator of regulated hazardous waste activities. The notification for the newly regulated waste was due no later than October 29, 1990.
27. Continuously from February 1990 through May 1992, the Respondent generated, stored, and land disposed hazardous waste grinding baghouse dust at its facility.
28. Respondent failed to provide the notification required by §3010 of RCRA on or before October 29, 1990, and in fact did not submit such notification until March 9, 1992.
29. Respondent's failure to timely submit the notification constitutes a violation of §3010 of RCRA from October 29, 1990, to March 9, 1992.
30. Respondent owns and operates a facility that treats, stores, or disposes of hazardous waste, and therefore it is an owner or operator of a hazardous waste management facility and subject to the requirements of 40 CFR Part 265.
31. 40 CFR §265.11 requires every facility owner or operator subject to 40 CFR Part 265 to apply to U.S. EPA for an identification number.



40 CFR §262.12 prohibits a generator from treating, storing, or disposing of hazardous waste unless it obtains an EPA identification number.

32. Respondent stored and disposed of hazardous waste without an EPA identification until March 9, 1992.
33. Respondent's failure to timely obtain an EPA identification number and continued storage and disposal activities without an EPA identification number constitutes a violation of 40 CFR §§265.11 and 262.12, respectively, from September 29, 1990, to March 9, 1992.

**COUNT TWO**

34. The allegations of paragraphs 1-33 of the Complaint are incorporated by reference as though set forth here in full.
35. Section 3005 of RCRA, 42 U.S.C. §6925, requires a person owning or operating an existing facility for treatment, storage, or disposal of any hazardous waste identified in 40 CFR Part 261 to apply for a RCRA permit: 40 CFR §270.10 requires submission of Part A of the permit application no later than November 19, 1980. After November 19, 1980, §3005(a) of RCRA prohibits a person from treating, storing, or disposing of hazardous waste unless the facility has a permit or interim status, as provided in §3005(e) of RCRA.
36. For newly regulated treatment, storage, or disposal facilities (TSDFs), §3005(e) of RCRA specifies that in order for a newly regulated TSDF to be granted interim Status, three conditions must be met: (1) the



facility or waste management unit must be in existence on the effective date of the rule; (2) the facility must submit a RCRA §3010 notification within six months after the date of promulgation of the new rules. For the TC newly regulated wastes the date of notification is October 29, 1990, see 55 Federal Register 11798 and 55 Federal Register 39409 (1990); and (3) the facility must submit a Part A application by September 25, 1990.

37. Respondent has never applied for or received a RCRA permit to store and dispose of hazardous waste at its facility.
38. Respondent failed to file a RCRA §3010 notification on or before October 29, 1990, and Respondent failed to file a Part A application by September 25, 1990.
39. Respondent stored and disposed hazardous waste without a RCRA permit or interim status from September 29, 1990, to May 29, 1992.
40. Respondent's failure to obtain a RCRA permit or acquire interim status constitutes a violation of 40 CFR §270.10 and §3005 of RCRA from September 29, 1990, to May 29, 1992.

### COUNT 3

41. The allegations of Paragraphs 1-40 of the Complaint are incorporated by reference as though set forth here in full.
42. Under the provisions of 40 CFR §265.1(b), owners or operators of facilities in existence on September 25, 1990, who failed to provide



timely notification as required by §3010 of RCRA and who failed to file a Part A permit application as required by 40 CFR §270.10(e) and §3005(e) are subject to the operating standards required in 40 CFR Part 265, Subparts B (General Facility Standards), C (Preparedness and Prevention Requirements), D (Contingency Plan and Emergency Procedures), E (Manifest System, Recordkeeping, and Reporting Requirements), G (Closure and Post-Closure Requirements), and H (Financial Requirements).

43. Respondent is an owner and operator of facility in existence on September 25, 1990, who failed to provide timely notification as required by §3010 of RCRA and who failed to file a Part A permit application as required by 40 CFR §270.10(e) and §3005(e); therefore is subject to the requirements of 40 CFR Part 265 cited in paragraph 42.
44. Respondent's failure to meet the operating standards, as set forth in paragraph 42, constitutes violations of 40 CFR Part 265, Subparts B, C, D, E, G, and H from September 29, 1990, onward.

#### COUNT 4

45. The allegations of Paragraphs 1-44 of the Complaint are incorporated by reference as though set forth here in full.
46. Under the provisions of 40 CFR §265.1(b), owners or operators of existing facilities who failed to provide timely notification as required by §3010 of RCRA and who failed to file a part A permit application as required by 40 CFR §270.10(e) and §3005(e) are subject



to the operating standards required in 40 CFR Part 265 Subpart L, specifically §§265.251, and 265.253 for hazardous waste piles.

47. Respondent is an owner and operator of a facility in existence on September 25, 1990, who failed to provide timely notification as required by §3010 of RCRA and who failed to file a Part A permit application as required by 40 CFR §270.10(e) and §3005(e); therefore is subject to the requirements of 40 CFR Part 265 cited in paragraph 42.
48. Respondent's failure to meet the operating standards set forth in paragraph 42 constitutes violations of 40 CFR Part 265 Subpart L from September 29, 1990, to February 22, 1992.



COMPLIANCE ORDER

Respondent having been initially determined to be in violation of the above cited rules and regulations, the following Compliance Order pursuant to Section 3008 of RCRA, 42 U.S.C. §6928, is entered:

A. Immediately upon the effective date of this Order, the Respondent shall determine if each solid waste the facility generates is a hazardous waste, as required by 40 CFR §262.11.

B. Immediately upon the effective date of this Order, the Respondent shall not conduct hazardous waste treatment, storage, or disposal activities for which a RCRA permit is required without having first obtained a finally effective RCRA permit or, if eligible, interim status.

C. Except as provided in paragraph D, Respondent shall immediately upon the effective date of this Order achieve compliance with each standard at 40 CFR 265 applicable to owners and operators of hazardous waste piles and maintain compliance with such standards until such time as U.S. EPA shall notify Respondent pursuant to 40 CFR 265.147(e).

D. Within forty-five (45) days of the effective date of this Order, the Respondent shall submit to U.S. EPA, Region 5, RCRA Permitting Branch, for approval, a closure and, if necessary, post-closure plan which meets the requirements of 40 CFR Part 265 Subparts G and H for its waste pile of hazardous waste. The Respondent shall implement the approved plan(s) in accordance with the schedule(s) contained therein.



E. Respondent shall notify U.S. EPA, in writing, upon achieving compliance with this Order and any part thereof. This notification shall be submitted no later than the times stipulated above to the U.S. EPA, Region 5, Waste Management Division, 77 West Jackson Boulevard, Chicago, Illinois 60604, Attention: Thad Slaughter, RCRA Enforcement Branch, HRE-8J.

A copy of these documents and all correspondence with U.S. EPA regarding this Order shall also be submitted to Mr. Thomas Linson, Chief, Hazardous Waste Management Branch, Indiana Department of Environmental Management, 105 South Meridian Street, P.O. Box 6015, Indianapolis, Indiana 46206-6015.

Notwithstanding any other provision of this Order, an enforcement action may be brought pursuant to Section 7003 of RCRA or other statutory authority where the handling, storage, treatment, transportation, or disposal of solid or hazardous waste at this facility may present an imminent and substantial endangerment to human health or the environment.



PROPOSED CIVIL PENALTY

In view of the above determination and in consideration of the seriousness of the violations cited herein, the potential harm to human health and the environment, and the ability of the Respondent to pay penalties, the Complainant proposes to assess a civil penalty in the amount of EIGHT HUNDRED TWENTY-FIVE THOUSAND FIVE HUNDRED NINE DOLLARS (\$825,509.00) against the Respondent, Hoosier Spline Broach Corporation, pursuant to Sections 3008(c) and 3008(g) of RCRA, 42 U.S.C. §6928. Attachment 1 to the Complaint provides a summary of the proposed civil penalty. Payment shall be made by certified or cashier's check payable to the Treasurer of the United States of America and shall be mailed to U.S. EPA, Region 5, P.O. Box 70753, Chicago, Illinois 60673. Copies of the transmittal of the payment should be sent to both the Regional Hearing Clerk, Planning and Management Division (MF-10J), and the Solid Waste and Emergency Response Branch Secretary, Office of Regional Counsel, (CS-3T), U.S. EPA, 77 West Jackson Blvd., Chicago, Illinois 60604.

Failure to comply with any requirements of the Order shall subject the above-named Respondent to liability for a civil penalty of up to TWENTY-FIVE THOUSAND DOLLARS (\$25,000) for each day of continued noncompliance with the deadlines contained in this Order. U.S. EPA is authorized to assess such penalties pursuant to RCRA Section 3008(c).



NOTICE OF OPPORTUNITY FOR HEARING

The above-named Respondent has the right to request a hearing to contest any material factual allegation set forth in the Complaint and Compliance Order or the appropriateness of any proposed compliance schedule or penalty. Unless Respondent has filed an answer not later than thirty (30) days from the date this Complaint is filed with the Regional Hearing Clerk, Respondent may be found in default of the above Complaint and Compliance Order.

To avoid a finding of default by the Regional Administrator you must file a written answer to this Complaint with the Regional Hearing Clerk, Planning and Management Division (MF-10J), United States Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, by . A copy of your answer and any subsequent documents filed in this action should be sent to Mr. John Tielsch, Assistant Regional Counsel (CS-3T), at the same address. Failure to answer by that date may result in a finding by the Regional Administrator that the entire amount of penalty sought in the Complaint is due and payable and subject to the interest and penalty provisions contained in the Federal Claims Collection Act of 1966, 31 U.S.C. §§3701 et seq.

Your answer should clearly and directly admit, deny, or explain each of the factual allegations of which Respondent has knowledge. Said answer should contain: (1) a definite statement of the facts which constitute the grounds of defense; and (2) a concise statement of the facts which Respondent intends to place at issue in the hearing.



The Consolidated Rules of Practice Governing the Administrative assessment of Civil Penalties and the Revocation or Suspension of Permits, 40 CFR Part 22, are applicable to this administrative action. A copy of these Rules is enclosed with this Complaint.



SETTLEMENT CONFERENCE

Whether or not Respondent requests a hearing, Respondent may confer informally with U.S. EPA concerning: (1) whether the alleged violations in fact occurred as set forth above; (2) the appropriateness of the compliance schedule; and (3) the appropriateness of any proposed penalty in relation to the gravity of the violations, and the Respondent's ability to pay such penalty. Respondent may request an informal settlement conference at any time by contacting this office. Any such request, however, will not affect either the thirty-day time limit for responding to this Complaint or the thirty-day time limit for requesting a formal hearing on the violations alleged herein.

U.S. EPA encourages all parties to pursue the possibilities of settlement through informal conferences. A request for an informal conference should be made in writing to Thad Slaughter, RCRA Enforcement Branch (HRE-8J), at the address cited above, or by calling him at (312) 886-4460.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 1993.

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Norman R. Niedergang  
Acting Associate Division Director  
Office of RCRA  
Complainant  
U.S. Environmental Protection Agency  
Region 5



CERTIFICATE OF SERVICE

I hereby certify that I have caused a copy of the foregoing Complaint to be served upon the persons designated below, on the date below, by causing said copy to be deposited in the U.S. Mail, First Class and certified-return receipt requested, postage prepaid, at Chicago, Illinois, in an envelope addressed to:

Mr. Gilbert Larison  
Hoosier Spline Broach Corporation  
1401 Touhy Pike  
Kokomo, Indiana 46903

I have further caused the original of the Complaint and this Certificate of Service to be served in the Office of the Regional Hearing Clerk located in the Planning and Management Division (MFA-10J), U.S. EPA, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, on the date below.

These are said persons' last known addresses to the subscriber.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 1993.

\_\_\_\_\_  
Secretary, Office of RCRA  
U.S. EPA, Region 5





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

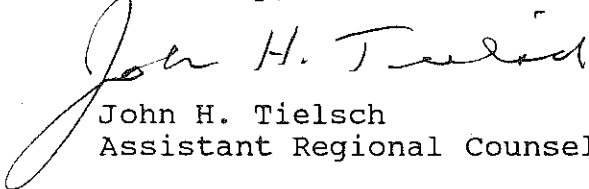
Frank W. Vanderheyden  
Administrative Law Judge  
U.S. Environmental Protection Agency  
401 M Street, S.W.  
Mail Code 1900  
Washington, D.C. 20460

Re: In the Matter of Hoosier Spline Broach Corp.  
Docket No. V-W-16-93

Dear Judge Vanderheyden:

With respect to the above-referenced matter, the parties submit  
their joint Status Report.

Sincerely,

  
John H. Tielsch  
Assistant Regional Counsel

cc: Regional Hearing Clerk (5MFA-14)

Marcie R. Horowitz  
Barnes & Thornburg  
1313 Merchants Bank Building  
11 South Meridian Street  
Indianapolis, Indiana 46204

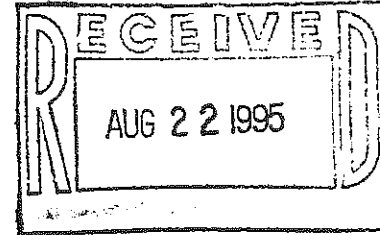


Printed on Recycled Paper



August 21, 1995

Ms. Diane Huston  
Hoosier Spline Broach Corporation  
1401 Touby Road  
P.O. Box 538  
Kokomo, Indiana 46903-0538



RE: Wastestream Characterization Report  
Hoosier Spline Broach Corporation  
Kokomo, Indiana

Dear Diane:

SECOR International Incorporated (SECOR) is submitting the following report on the waste sampling and characterization conducted on July 28, 1995, at the Hoosier Spline Broach Corporation, located at 1401 Touby Pike in Kokomo, Indiana. The purpose of the sampling was to collect representative samples of the two wastestreams generated by Hoosier Spline Broach Corporation for analysis for TCLP metals to submit the results to the Byers Landfill for reauthorization of the landfill disposal approval. The sampling for this project was conducted by Mr. Johnie R. Baker, Principal Engineer with SECOR.

#### **Grinding Sludge from Blanchard Process**

A representative composite sample of the grinding sludge generated by the Blanchard Machine was collected from two accumulation drums. A composite sample was collected using a new polyethylene scoop, which had been completely rinsed with distilled water, by taking samples directly from each drum and compositing into two glass sample containers. The containers samples were mixed during sampling by vigorously shaking the sample container several times during sampling. Details of these samplings are included on the Sample Information Sheets in Attachment A. The samples were properly labeled and immediately iced down for shipment to Heritage Laboratories, Inc. A Chain-of-Custody form was completed on all samples.

#### **Grinding Sludge from Dry Grinding Process**

A representative composite sample of the grinding sludge from the dry grinding process was collected from the two accumulation drums under the silos directly outside the building. A composite sample was collected using a new polyethylene scoop, which had been completely rinsed with distilled water, by taking samples directly from each drum and compositing into two glass sample containers. The containers samples were mixed during sampling by vigorously shaking the sample container several times during sampling. Details of these samplings are



Ms. Diane Huston

August 21, 1995

Page 2

included on the Sample Information Sheets in Attachment A. The samples were properly labeled and immediately iced down for shipment to Heritage Laboratories, Inc. A Chain-of-Custody form was completed on all samples.

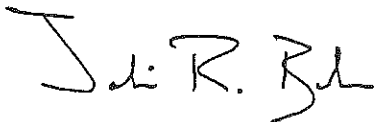
### **Analytical Results**

All samples from this characterization project were submitted to Heritage Laboratories, Inc., located at 7901 West Morris Street in Indianapolis, Indiana. All containers were provided by Heritage Laboratories, Inc. Sample containers were properly labeled and chain-of-custody forms completed on all samples. A completed copy of the chain-of-custody form is included in Attachment B. All samples were iced down in coolers for transport to Heritage Laboratories, Inc. Samples were analyzed for TCLP Metals using Methods SW 846-1311, SW 846-3010A, SW 846-6010A and SW846-7470. The analytical results of these samples are included in Attachment C. As indicated in the analytical reports, neither of the two wastestreams exhibited any hazardous waste characteristic for TCLP metals.

If you should have any questions, please do not hesitate to contact our office at 317-876-8375. Thank you for this opportunity to service Hoosier Spline Broach Corporation.

Sincerely,

**SECOR International Incorporated**



Johnie R. Baker  
Principal Engineer

Attachments



**ATTACHMENT A**  
**SAMPLE SUBMISSION SHEET**



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BROACH CORP.; Kokomo, IN

Sample I.D.: Blanchard Wet Grinding Sample Control No.: 1

Sample Location: FROM DRUMS AT BLANCHARD MACHINING OPERATION

Sample Date: 07 / 28 / 95 Time Sampled: 8 : 45 (AM) PM

Field Test(s) Performed	Result	Sample Types (circle all applicable):
<u>N/A</u>		Mon. Well Res. Well Mun. Well Ind. Well
		Leachate Creek River Ditch
		Lagoon Lake Pond Sediment
		Soil <u>Sludge</u> Sand Ind. Waste
		Solid Oil Other
		Blank (Equipment/Trip/Field) Background

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic		H <sub>2</sub> SO <sub>4</sub> (50%)	
1 L glass		HNO <sub>3</sub> (conc.)	
500 ml glass		NaOH (50%)	
40 ml vial		Zinc Acetate (2N)	
250 ml plastic		Other	
1L amber glass		Sample Iced	
Other	<u>2</u>	No preservatives used for non-aqueous samples	

Additional Sample Location Information:

SAMPLE COLLECTED DIRECT FROM DRUMS OF SLUDGE GENERATED FROM  
BLANCHARD MACHINE. SAMPLE WAS PLACED INTO CLEAN SAMPLE  
CONTAINER, SHAKEN VIGOROUSLY; TIGHTLY SEALED & ICED DOWN

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

SAMPLE CONSISTED OF GREY-COLORED; FINE TO MEDIUM SIZED  
GRINDINGS WITH SOME MOISTURE

Sampling Equipment Used: A NEW POLYETHYLENE SCOOP WAS USED TO COLLECT  
A COMPOSITE SAMPLE FROM 2 DRUMS NEXT TO BLANCHARD MACHINE

Deviations from Sampling Plan: N/A.

Signature of Sampler: J. L. R. B.



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BROACH CORP.; KOKOMO, IN

Sample I.D.: DRY GRINDING DUST Sample Control No.: 2

Sample Location: FROM DRUMS AT DRY GRINDING COLLECTIONS SILD

Sample Date: 07 / 28 / 95 Time Sampled: 8 : 48 (AM) PM

Field Test(s)

Performed	Result
<u>N/A</u>	

Sample Types (circle all applicable):

Mon. Well	Res. Well	Mun. Well	Ind. Well
Leachate	Creek	River	Ditch
Lagoon	Lake	Pond	Sediment
Soil	Sludge	Sand	Ind. Waste
Solid	Oil	Other	
Blank (Equipment/Trip/Field)		Background	

Containers	No.
1 L plastic	
1 L glass	
500 ml glass	
40 ml vial	
250 ml plastic	
1L amber glass	
Other	<u>2</u>

Preservatives	Lab/Lot No.
H <sub>2</sub> SO <sub>4</sub> (50%)	
HNO <sub>3</sub> (conc.)	
NaOH (50%)	
Zinc Acetate (2N)	
Other	

Sample Iced  
No preservatives used  
for non-aqueous samples

Additional Sample Location Information:

SAMPLE COLLECTED DIRECTLY FROM ACCUMULATION DRUM  
UNDER SILD ON DRY VACUUM SYSTEM

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

SAMPLE CONSISTED OF FINE GREY COLORED GRINDING DUST.  
VERY DRY & LOOSE.

Sampling Equipment Used: A new polyethylene Scoop was used to collect a  
Composite Sample for 2 drums; shaken vigorously and tightly sealed

Deviations from Sampling Plan: N/A

Signature of Sampler: J. R. Bu



**ATTACHMENT B**  
**CHAIN OF CUSTODY FORMS**







**ATTACHMENT C**

**HERITAGE LABORATORIES, INC.....**  
**ANALYTICAL REPORTS**



# CERTIFICATE OF ANALYSIS

Service Location HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 1901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	<b>RECEIVED</b> <b>AUG 14 1995</b>	Received 28-JUL-95	Project 2920	Lab ID A349208
	Complete 10-AUG-95	PO Number Z 0005-001-01		
	Printed 10-AUG-95	Sampled 28-JUL-95 08:45		

Report To  JOHNIE R. BAKER SECOR P.O. BOX 68178 8770 GUION ROAD SUITE L INDIANAPOLIS, IN 46268-7178	Bill To  ACCOUNTS PAYABLE SECOR 8770 GUION ROAD, SUITE L P.O. BOX 68178 INDIANAPOLIS, IN 46268-7178
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Sample Description SAMPLE ID: BLANCHARD WET GRINDING SLUDGE
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TOTAL SOLIDS EPA 160.3 Analyst: A. WOOD      Analysis Date: 28-JUL-95 16:45      Test: G401.7.0 IND1				
SOLIDS	Parameter	Result	Det. Limit	Units
		84	0.001	Percent

TOX CHAR LEACHING PROCEDURE (TCPL METALS ONLY) SW846-1311 Analyst: G. CARTER      Analysis Date: 31-JUL-95      Test: P106.1.0				
TOTAL SAMPLE WEIGHT	Parameter	Result	Det. Limit	Units
EXTRACTED SAMPLE		100		Grams
SOLIDS		0		Grams
9.5 MM SIEVE TEST		100		Grams
INITIAL PH		100		Percent
ADJUSTED PH		YES		Passed
BUFFER SOLUTION PH		8.55		Std. Units
FINAL PH		3.62		Std. Units
VOLUME BUFFERED SOLUTION		4.97		Std. Units
VOLUME EXTRACT FILTERED		5.57		Std. Units
VOLUME LIQUID (ADD BACK)		2000		mL
TOTAL VOLUME FILTRATE		2000		mL
AMBIENT TEMPERATURE		0		mL
INITIAL TIME		23.0		Degrees C
FINAL TIME		14236.2		HRS
PHASE 0 VOLUME (REP 0)		14252.4		HRS
PHASE 0 WEIGHT		NA		mL
PHASE 0 DENSITY		NA		Grams
PHASE 1 VOLUME (REP 1)		NA		g/mL
PHASE 1 WEIGHT		NA		mL
PHASE 1 DENSITY		NA		Grams
		NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A Analyst: D. NEWHART      Analysis Date: 02-AUG-95 14:00      Test: P130.8.0 Prep: TOX CHAR LEACHING PROCEDURE (TCPL METALS ONLY) SW846-1311 P106.1.0				
INITIAL WEIGHT OR VOLUME	Parameter	Result	Det. Limit	Units
FINAL VOLUME		100		mL
		100		mL



**ARSENIC TRACE ICP (1 POINT MSA) SW846-6010A**

Analyst: J. WALLACE

Analysis Date: 03-AUG-95 11:00 Instrument: ICP

Test: M603.0.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.025	mg/L
ADDITION 1	0.100		mg/L
SAMPLE	-0.0006		Conc
SAMPLE + ADD 1	0.0995		Conc
DILUTION	5		

**BARIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M604.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	2.6	0.050	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.5263		Conc
SAMPLE + ADD 1	5.4955		Conc
DILUTION	5		

**CADMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M608.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.050	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	-0.0078		Conc
SAMPLE + ADD 1	4.9014		Conc
DILUTION	5		

**CHROMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M610.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	0.79	0.050	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.1578		Conc
SAMPLE + ADD 1	5.0678		Conc
DILUTION	5		

**LEAD ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M616.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	0.29	0.25	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.0589		Conc
SAMPLE + ADD 1	5.0069		Conc
DILUTION	5		



**SELENIUM TRACE ICP (1 POINT MSA) SW846-6010A**

Analyst: J. WALLACE

Analysis Date: 03-AUG-95 11:00 Instrument: ICP

Test: M628.0.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.025	mg/L
ADDITION 1	0.100		mg/L
SAMPLE	0.0005		Conc
SAMPLE + ADD 1	0.105		Conc
DILUTION	5		

**SILVER ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M630.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
ADDITION 1	1.000		mg/L
SAMPLE	-0.0086		Conc
SAMPLE + ADD 1	0.9415		Conc
DILUTION	5		

**MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470**

Analyst: E. MERRILL

Analysis Date: 07-AUG-95 08:00

Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		mL
FINAL VOLUME	100		mL

**MERCURY CVAA (1 POINT MSA) SW846-7470**

Analyst: A. ROBERTSON

Analysis Date: 08-AUG-95 12:13 Instrument: CVAA

Test: M620.6.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470 P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	.005	mg/L
ADDITION 1	0.001		mg/L
SAMPLE	-0.00005		Conc
SAMPLE + ADD 1	0.00073		Conc
DILUTION	1		

**Sample Comments**

BDL Below Detection Limit

NA Not Applicable

YES Yes

Sample chain of custody number 38746.

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without the written approval of the lab.

Approved :

Brenda O Byer



# CERTIFICATE OF ANALYSIS

<b>Service Location</b> HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	Received	Project	Lab ID
	28-JUL-95	2920	A349209
	Complete	PO Number	
	10-AUG-95	Z 0005-001-01	
	Printed	Sampled	
	10-AUG-95	28-JUL-95 08:48	

<b>Report To</b>	<b>Bill To</b>
JOHNNIE R. BAKER SECOR P.O. BOX 68178 8770 GUION ROAD SUITE L INDIANAPOLIS, IN 46268-7178	ACCOUNTS PAYABLE SECOR 8770 GUION ROAD, SUITE L P.O. BOX 68178 INDIANAPOLIS, IN 46268-7178

<b>Sample Description</b>
SAMPLE ID: DRY GRINDING SLUDGE

<b>TOTAL SOLIDS EPA 160.3</b>			
Analyst: A. WOOD		Analysis Date: 28-JUL-95 16:45	
		Test: G401.7.0 1ND1	
<b>SOLIDS</b>	<b>Parameter</b>	<b>Result</b>	<b>Det. Limit</b>
		100	0.001
			<b>Units</b>
			Percent

<b>TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311</b>			
Analyst: G. CARTER		Analysis Date: 31-JUL-95	
		Test: P106.1.0	
<b>Parameter</b>	<b>Result</b>	<b>Det. Limit</b>	<b>Units</b>
TOTAL SAMPLE WEIGHT	100		Grams
LIQUID FRACTION (GRAMS)	0		Grams
EXTRACTED SAMPLE	100		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST	YES		Passed
INITIAL PH	6.95		Std. Units
ADJUSTED PH	3.93		Std. Units
BUFFER SOLUTION PH	4.97		Std. Units
FINAL PH	6.10		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	0		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23.0		Degrees C
INITIAL TIME	14236.2		HRS
FINAL TIME	14252.4		HRS
PHASE 0 VOLUME (REP 0)	NA		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

<b>FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A</b>			
Analyst: D. NEWHART		Analysis Date: 02-AUG-95 14:00	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0		Test: P130.8.0	
<b>Parameter</b>	<b>Result</b>	<b>Det. Limit</b>	<b>Units</b>
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL



**ARSENIC TRACE ICP (1 POINT MSA) SW846-6010A**

Analyst: J. WALLACE

Analysis Date: 03-AUG-95 11:00 Instrument: ICP

Test: M603.0.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.025	mg/L
ADDITION 1	0.100		mg/L
SAMPLE	-0.0009		Conc
SAMPLE + ADD 1	0.103		Conc
DILUTION	5		

**BARIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M604.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	2.1	0.050	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.4180		Conc
SAMPLE + ADD 1	5.4509		Conc
DILUTION	5		

**CADMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M608.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.050	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	-0.0038		Conc
SAMPLE + ADD 1	4.9721		Conc
DILUTION	5		

**CHROMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M610.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.050	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	0.0075		Conc
SAMPLE + ADD 1	4.9707		Conc
DILUTION	5		

**LEAD ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M616.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.25	mg/L
ADDITION 1	5.000		mg/L
SAMPLE	-0.0059		Conc
SAMPLE + ADD 1	4.9904		Conc
DILUTION	5		



**SELENIUM TRACE ICP (1 POINT MSA) SW846-6010A**

Analyst: J. WALLACE

Analysis Date: 03-AUG-95 11:00 Instrument: ICP

Test: M628.0.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.040	0.025	mg/L
ADDITION 1	0.100		mg/L
SAMPLE	0.0080		Conc
SAMPLE + ADD 1	0.113		Conc
DILUTION	5		

**SILVER ICP (1 POINT MSA) SW846-6010A**

Analyst: M. JAO

Analysis Date: 03-AUG-95 12:47 Instrument: ICP

Test: M630.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
ADDITION 1	1.000		mg/L
SAMPLE	-0.0131		Conc
SAMPLE + ADD 1	0.9255		Conc
DILUTION	5		

**MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470**

Analyst: E. MERRILL

Analysis Date: 07-AUG-95 08:00

Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		mL
FINAL VOLUME	100		mL

**MERCURY CVAA (1 POINT MSA) SW846-7470**

Analyst: A. ROBERTSON

Analysis Date: 08-AUG-95 12:13 Instrument: CVAA

Test: M620.6.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470 P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	.005	mg/L
ADDITION 1	0.001		mg/L
SAMPLE	-0.00006		Conc
SAMPLE + ADD 1	0.0009		Conc
DILUTION	1		

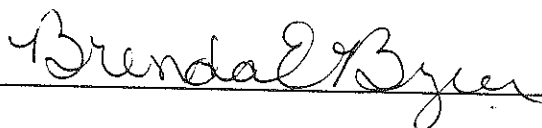
BDL Below Detection Limit  
 NA Not Applicable  
 YES Yes

## Sample Comments

Sample chain of custody number 38746.

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Approved :





# BARNES & THORNBURG

Marcie R. Horowitz  
(317) 231-7519

1313 Merchants Bank Building  
11 South Meridian Street  
Indianapolis, Indiana 46204  
(317) 638-1313

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October 25, 1994

Mr. Gregory C. Lorenz  
Senior Environmental Manager  
Solid and Hazardous Waste Management  
Indiana Department of Environmental Management  
100 North Senate Avenue  
Post Office Box 6015  
Indianapolis, Indiana 46206-6015

**Re: Special Waste Certification #40795**

Dear Mr. Lorenz:

I am in receipt of your October 20, 1994 letter to Mr. Gilbert Larison of Hoosier Spline Broach Corp. ("HSB") regarding the above-referenced matter. Specifically, your letter advised Mr. Larison that analytical results submitted for certification of HSB's wet grinding sludge indicated that the waste was characteristically hazardous for selenium.

After the reported selenium result was brought to our attention by Ms. Bo Lawrence a couple of weeks ago, we contacted Heritage Environmental Services to inquire about the validity of the reported value. HSB uses no materials that contain selenium and therefore the reported selenium result was unanticipated and suspect. After reviewing the data, Mr. Greg Busch, the QA officer for Heritage, advised us that *the selenium result that had been reported for Lab ID #A309692 on May 13, 1994 and submitted to IDEM could not be validated, that the result had been reported in error, and that therefore Heritage was withdrawing the reported selenium result.* Mr. Busch explained that SW-846 Method 6010, which was used in the May 1994 analysis, is a convenient method that can screen for many elements at once. However, Method 6010 sometimes produces a false positive for selenium as a result of interference from other elements, such as iron. (HSB's sludge is derived from the grinding of steel stock and therefore consists primarily of iron.) If a positive result is obtained, the laboratory's standard practice is to verify the result using another method, such as SW-846 Method 7740, which is specific for selenium. This step was erroneously not performed for Sample #A309692 and therefore the apparent positive selenium result was never verified. Heritage has therefore issued an amended laboratory report for Lab ID #A309692, which does not report a value for selenium. A copy of the amended report is attached as Exhibit "A." (See in particular "Sample Comments" on page 3 of the amended report.) Please discard the earlier version of this report which has been superseded by the amended, corrected report.



Mr. Gregory C. Lorenz  
October 25, 1994  
Page 2

HSB has resubmitted a sample of its wet grinding sludge to Heritage for TCLP selenium analysis. The results of this analysis were reported to us yesterday. This analysis confirms that selenium is *not detected* in the leachate from this waste stream at a detection limit of 0.0050 mg/L. This is consistent with HSB's knowledge of the waste stream. Moreover, because HSB's waste stream is homogeneous and consistent over time, the resubmitted sample is representative of the whole waste stream. A copy of this analysis is attached as Exhibit "B."

On the basis of this information, we respectfully request that IDEM reinstate Special Waste Certification No. 40795 for HSB's wet grinding sludge, which does not exhibit the characteristics of a hazardous waste.

We apologize for any inconvenience this may have caused, and thank you for your time and attention. Please call if you have any questions or need additional information.

Sincerely,



Marcie R. Horowitz

MRH:naw

Enclosures

*Via Hand Delivery*

cc: Mr. George Ritchotte (*Via Hand Delivery*)  
Mr. James H. Hunt, OSHWM (*Via Hand Delivery*)  
Ms. Bo Lawrence, Oak Ridge Landfill  
Mr. Greg Busch, Heritage Environmental Services, Inc.



# CERTIFICATE OF ANALYSIS

<b>Service Location</b> HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	<b>Received</b> 02-MAY-94	<b>Project</b> 2920	<b>Lab ID</b> A309692
	<b>Complete</b> 13-MAY-94	<b>PO Number</b> R0027-001-01	
	<b>Printed</b> 12-OCT-94	<b>Sampled</b> 28-APR-94 11:15	

<b>Report To</b>  JOHNNIE R. BAKER SEACOR P.O. BOX 68178 8770 GUION ROAD SUITE L INDIANAPOLIS, IN 46268-7178	<b>Bill To</b>  TINA NICHOLS SEACOR P.O. BOX 68178 INDIANAPOLIS, IN 46268-7178
--	---

<b>Sample Description</b>  SAMPLE ID: 42894A DESCRIPTION: GRINDING SLUDGE BLANCHARD MACH
---

<b>TOTAL SOLIDS EPA 160.3</b> Analyst: B. PRIDEMORE      Analysis Date: 02-MAY-94      Test: G401.7.0			
Parameter	Result	Det. Limit	Units
SOLIDS	91	0.001	Percent

<b>PH (S/S/S) SW846-9045A</b> Analyst: D. NEUHART      Analysis Date: 03-MAY-94      Test: G624.0.0			
Parameter	Result	Det. Limit	Units
PH	8.0	0.1	Std. Units
20 grams/60 mL -- Used for analysis of pH			

<b>PAINT FILTER TEST SW846-9095</b> Analyst: C. CALVERT      Analysis Date: 05-MAY-94      Test: G103.1.0			
Parameter	Result	Det. Limit	Units
PAINT FILTER LIQUID (TOTAL ML AFTER 5 MINUTES)	0		mL
INITIAL SAMPLE WEIGHT	100		Grams

<b>TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311</b> Analyst: C. CALVERT      Analysis Date: 03-MAY-94      Test: P106.1.0			
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100		Grams
LIQUID FRACTION (GRAMS)	0		Grams
EXTRACTED SAMPLE	100		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST			Passed
INITIAL PH	8.01		Std. Units
ADJUSTED PH	3.02		Std. Units
BUFFER SOLUTION PH	4.90		Std. Units
FINAL PH	6.08		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	0		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	23		Degrees C
INITIAL TIME	12296.4		HRS
FINAL TIME	12312.5		HRS



Parameter	Result	Det. Limit	Units
PHASE 0 VOLUME (REP 0)			mL
PHASE 0 WEIGHT			Grams
PHASE 0 DENSITY			g/mL
PHASE 1 VOLUME (REP 1)			mL
PHASE 1 WEIGHT			Grams
PHASE 1 DENSITY			g/mL

**FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A**

Analyst: G. CARTER

Analysis Date: 04-MAY-94

Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

**BARIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M604.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.88	0.050	mg/L
ADDITION 1	2.00		mg/L
SAMPLE	0.1766		Conc
SAMPLE + ADD 1	2.149		Conc
DILUTION	5		

**CADMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M608.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L
ADDITION 1	2.0		mg/L
SAMPLE	0.0029		Conc
SAMPLE + ADD 1	1.930		Conc
DILUTION	5		

**CHROMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M610.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	0.054	0.050	mg/L
ADDITION 1	2.0		mg/L
SAMPLE	0.0108		Conc
SAMPLE + ADD 1	1.982		Conc
DILUTION	5		

**LEAD ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M616.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.25	mg/L
ADDITION 1	2.00		mg/L
SAMPLE	0.0262		Conc
SAMPLE + ADD 1	1.863		Conc
DILUTION	5		



**SILVER ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M630.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
ADDITION 1	0.400		mg/L
SAMPLE	-0.0039		Conc
SAMPLE + ADD 1	0.3501		Conc
DILUTION	5		

**ARSENIC ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M603.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.50	mg/L
ADDITION 1	2.00		mg/L
SAMPLE	0.0165		Conc
SAMPLE + ADD 1	1.991		Conc
DILUTION	5		

**MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470**

Analyst: K. BUCKNER

Analysis Date: 05-MAY-94

Test: P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		mL
FINAL VOLUME	100		mL

**MERCURY CVAA (1 POINT MSA) SW846-7470**

Analyst: K. BUCKNER

Analysis Date: 05-MAY-94

Instrument: CVAA

Test: M620.6.0

Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470 P131.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0050	mg/L
ADDITION 1	0.00100		mg/L
SAMPLE	0.000		Conc
SAMPLE + ADD 1	0.000906		Conc
DILUTION	1		

**Sample Comments**

AMENDED REPORT TO REMOVE QUESTIONABLE ANALYSIS FOR SELENIUM. ADDITIONAL  
SAMPLE TO BE RE-SUBMITTED FOR TCLP SELENIUM. 12-OCT-94 GAB.

BDL Below Detection Limit

Sample chain of custody number 19601.

This Certificate shall not be reproduced, except in full,  
without the written approval of the lab.

Quality Assurance Officer: GABUSCH

Page 3 (last page)



TO ENSURE PROPER HANDLING OF SAMPLES PLEASE COMPLETE THIS ENTIRE FORM

**HERITAGE ENVIRONMENTAL SERVICES**  
**COMMERCIAL LABORATORY OPERATIONS**

7901 West Morris Street

Indianapolis, Indiana 46231 (317) 243-0811 Fax (317) 486-5095

I - 26-17

Co. Name: <b>HOOVER SRLINE &amp; BROACH, Kokomo, IN</b>				<b>Analyses Requested</b> (Note special detection limits or methods)												Report To: <b>Co: BARNES &amp; THOMBURG</b> Add: <div style="text-align: center;">↓</div> <b>Attn: MARCIE HOROWITZ</b> Phone: Accelerated Turnaround Requested _____ (Subject to Additional Charge) Result Request by: _____ / _____ / _____ <div style="text-align: right;">Mo      Day      Yr</div> (Date must be Accepted and Approved by Lab)																																																																																															
Project Name:				<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             Sample Type (Matrix):              DW, GW, WW, Soil, Oil, Sludge, Other           </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             No. of Containers  <b>1</b> </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> <b>SELENIUM ONLY (TEPP)</b> </div> </div>												LAB Sample No.																																																																																															
Quote No.:      PO No.:																																																																																																															
ENVIRONMENTAL PROGRAM:																																																																																																															
CWA   NPDES _____ IWP _____ SLUDGE _____ RCRA   MW _____ SW _____ DISPOSAL <b>X</b> SDWA _____ CERCLA/SUPERFUND _____ OTHER _____																																																																																																															
Sampled by: <b>John R. Baker SECOIR</b>				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Sample ID:</th> <th>Date:</th> <th>Time:</th> <th>Comp</th> <th>Grab</th> <th>Sample Description:</th> </tr> </thead> <tbody> <tr> <td></td> <td>10-13-94</td> <td>2:20</td> <td>X</td> <td></td> <td>WET GRINDING SLUDGE</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>												Sample ID:	Date:	Time:	Comp	Grab	Sample Description:		10-13-94	2:20	X		WET GRINDING SLUDGE																																																																																				
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	10-13-94	2:20	X														WET GRINDING SLUDGE																																																																																														
Inquished by: (Signature) <b>J.R.B.</b>				Date / Time <b>10-13-94 / 4:00</b>				Received by: (Signature)				Relinquished by: (Signature)				Date / Time <b>/</b>		Received by: (Signature)																																																																																													
Inquished by: (Signature)				Date / Time <b>/</b>				Received by: (Signature)				Relinquished by: (Signature)				Date / Time <b>/</b>		Received by: (Signature)																																																																																													
Inquished by: (Signature)				Date / Time <b>/</b>				Received for Lab by: (Signature) <b>[Signature]</b>				Date / Time <b>10/13/94 1600</b>		Remarks: <b>SEE GREG BUSCH PRIOR TO RUNNING.</b> <b>NO CHARGE ON THIS SAMPLE</b>																																																																																																	

Distribution: White original to be retained by client, Yellow copy to accompany sample to laboratory, Pink copy to also be retained by client.



# CERTIFICATE OF ANALYSIS

<b>Service Location</b> HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 75 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	<b>Received</b>	<b>Project</b>	<b>Lab ID</b>
	13-OCT-94	2920	A325236
	<b>Complete</b>	<b>PO Number</b>	
	21-OCT-94	VERBAL	
	<b>Printed</b>	<b>Sampled</b>	
	21-OCT-94	13-OCT-94 14:20	

<b>Report To</b>	<b>Bill To</b>
MARCIE HOROWITZ BARNES & THORNBERG 1313 MERCHANTS BANK BUILDING 11 SOUTH MERIDIAN INDIANAPOLIS, IN 46204	TINA NICHOLS SEACOR P.O. BOX 68178 INDIANAPOLIS, IN 46268-7178

<b>Sample Description</b>
SAMPLE I.D.: WET GRINDING SLUDGE LOCATION: HOOSIER SPLINE & BROACH - KOKOMO, IN

<b>TOTAL SOLIDS EPA 160.3</b>			
Analyst: B. PRIDEMORE		Analysis Date: 13-OCT-94 11:30	
		Test: G401.7.0	
<b>SOLIDS</b>	<b>Parameter</b>	<b>Result</b>	<b>Det. Limit</b>
		83	0.001
			<b>Units</b>
			Percent

<b>TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311</b>			
Analyst: C. CALVERT		Analysis Date: 17-OCT-94	
		Test: P106.1.0	
<b>Parameter</b>	<b>Result</b>	<b>Det. Limit</b>	<b>Units</b>
TOTAL SAMPLE WEIGHT	100		Grams
LIQUID FRACTION (GRAMS)	0		Grams
EXTRACTED SAMPLE	100		Grams
SOLIDS	100		Percent
9.5 MM SIEVE TEST			Passed
INITIAL PH	7.87		Std. Units
ADJUSTED PH	5.08		Std. Units
BUFFER SOLUTION PH	2.91		Std. Units
FINAL PH	5.74		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	0		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	21		Degrees C
INITIAL TIME	13922.1		HRS
FINAL TIME	13938.1		HRS
PHASE 0 VOLUME (REP 0)	NA		mL
PHASE 0 WEIGHT	NA		Grams
PHASE 0 DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA		mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL



**GFAA ACID DIGESTION (LEACHATE) SW846-3020A**

Analyst: D. NEUHART

Analysis Date: 19-OCT-94 14:30

Test: P130.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

**SELENIUM GFAA (1 POINT MSA) SW846-7740**

Analyst: J. KRAMER

Analysis Date: 19-OCT-94 22:23 Instrument: GFAA

Test: M628.6.0

Prep: GFAA ACID DIGESTION (LEACHATE) SW846-3020A P130.9.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L
ADDITION 1	0.0100		mg/L
SAMPLE	0.0004		Conc
SAMPLE + ADD 1	0.0057		Conc
DILUTION	1		

## Sample Comments

BDL Below Detection Limit  
NA Not Applicable

Sample chain of custody number 26817.

This Certificate shall not be reproduced, except in full,  
without the written approval of the lab.

Additional copies of this report sent to:

JOHNIE R. BAKER, SEACOR

P O BOX 68178 8770 GUION ROAD SUITE L, INDIANAPOLIS, IN 46268-7178

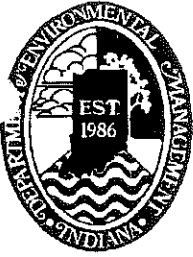
Quality Assurance Officer: \_\_\_\_\_



Page 2 (last page)



Thad Slaughter



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live*

*Evan Bayh*  
Governor  
*Kathy Prosser*  
Commissioner

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Telephone 317-232-8603  
Environmental Helpline 1-800-451-6027

October 20, 1994

Mr. Gilbert Larison  
Hoosier Spline Broach Corp.  
1401 Touby Pike  
P.O. Box 538  
Kokomo, IN. 46903-0538

RECEIVED  
OCT 25 1994

OFFICE OF RCRA  
WASTE MANAGEMENT DIVISION  
EPA, REGION V

Dear Mr. Larison:

Re: Special Waste Certification #40795

It has recently been brought to the attention of this Office that the analytical information submitted for certification of the waste stream wet grinding sludge from blanchard machine indicates that this waste is characteristically hazardous for selenium (D010).

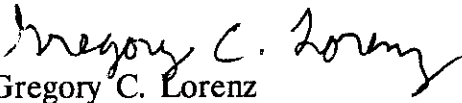
Pursuant to the Indiana Solid Waste Rule 329 IAC 2-21-10, no hazardous waste may be certified as special waste and that waste shall not be disposed in a solid waste facility permitted under 329 IAC 2. Therefore, by means of this letter, the IDEM is hereby revoking Special Waste Certification No. 40795. Information on the proper management procedures for hazardous waste may be obtained by contacting the Compliance Monitoring Section of the Hazardous Waste Management Branch at 317/232-8941.

If you wish to reapply for certification as a special waste, you will need to demonstrate that the waste is consistently no longer characteristically hazardous. In order to establish such, we will require documentation of source determination and source removal, and/or general housekeeping procedures and staff training to prevent future possible sources of selenium from entering the waste. Additionally, you must provide at least three current sets of analytical taken from separate generating events of the waste stream and demonstrate that the waste stream is not statistically characteristically hazardous.

Mr. Gilbert Larison  
Re: Special Waste Certification #40795  
page 2

If you have any additional questions, please contact Mr. George Ritchotte at 317/232-8401.

Sincerely,



Gregory C. Lorenz

Senior Environmental Manager

Solid Waste Facilities Branch

Solid and Hazardous Waste Management Branch

GAR

cc: Ms. Bo Lawrence, Oak Ridge Landfill  
Mr. James H. Hunt, OSHWM

December 15, 1993

Barnes & Thornburg  
1313 Merchants Bank Building  
11 South Meridian  
Indianapolis, IN 46204

Attention: Marcie R. Horowitz

RE: Hoosier Spline Broach Corporation; Kokomo, Indiana

Dear Marcie:

Science & Engineering Analysis Corporation (SEACOR) is submitting the following clarification on the waste sampling and characterization conducted at the Hoosier Spline Broach Corporation, located at 1401 Touby Pike in Kokomo, Indiana. This clarification is made in reference to the Waste Sampling and Characterization Report, dated December 6, 1993 and prepared by SEACOR.

The following sampling technique was utilized for the sampling of the two wastestreams identified as (1) grinding sludge from Blanchard process, and (2) grinding sludge from dry grinding process. Wastestream sampling was conducted on the following dates in 1993: September 23rd, October 5th, October 14th, and October 20th.

On each sampling date, a representative composite sample of each wastestream was collected from two accumulation drums at the Blanchard Machine and at the dry vacuum collection system, as described and documented in our report dated December 6, 1993. For each wastestream, a composite sample was collected using a new polyethylene scoop, which had been completely rinsed with distilled water, by taking samples directly from each drum and compositing into two glass sample containers. From ten to twelve grab samples were collected from these drums at different locations and depths throughout the drums. These grab samples were placed into the sample containers and mixed by vigorously shaking the sample container several times during sampling. Extreme care was taken to ensure the samples of each wastestream were representative samples of the wastes being generated. In addition, the processes generating the wastes and collection of the wastes would involve mixing of the waste to make the samples representative. Details of these samplings are included on the Sample Information Sheets in Appendix A of the above-referenced report. The samples were properly labeled and immediately iced down for shipment to Heritage Laboratories, Inc. A Chain-of-Custody form was completed on all samples. After each sampling, the accumulation drums were changed out and replaced with empty drums, so that subsequent samplings would be representative of new and different wastes from this process.

Prior to the sampling conducted on October 20, 1993, plant personnel had just completed the cleaning of the Blanchard Machine. This composite sample consisted of the typical grinding sludge as described earlier, plus the residual accumulated sludges cleaned from the machine.



Ms. Marcie Horowitz  
December 15, 1993  
Page 2

In response to the site information sheet included in the report, the approximate concentrations identified at the bottom of the form is an estimated concentration of anticipated constituents in the resultant extraction test for TCLP chromium. This information is provided to inform the laboratory of the possible magnitude of constituents, so that they may prepare the proper dilutions to accurately measure the amount of constituent. The form used by SEACOR was provided by the Indiana Department of Environmental Management as an example for use in their Voluntary Clean Up Program.

If you should have any further questions, please do not hesitate to contact our office.

Sincerely,

Science & Engineering Analysis Corporation

*Johnie R. Baker (c.j.g.)*

Johnie R. Baker  
Principal Engineer



# BARNES & THORNBURG

Marcie R. Horowitz  
(317) 231-7519

1313 Merchants Bank Building  
11 South Meridian Street  
Indianapolis, Indiana 46204  
(317) 638-1313

TWX 810-341-3427 B&T LAW IND  
Telecopier (317) 231-7433

December 23, 1993

John Tielsch, Esquire  
Assistant Regional Counsel (CS-3T)  
U.S. Environmental Protection Agency  
Region V  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

Re: Hoosier Spline Broach Corp.

Dear John:

Enclosed please find the following:

- 1) Letter dated December 15, 1993 from Johnie R. Baker of SEACOR in response to Thad Slaughter's request for clarification of SEACOR's *Waste Sampling and Characterization Report* dated December 6, 1993;
- 2) Laboratory results for sampling referenced in footnotes 2 and 3 of my letter to you dated December 9, 1993; and
- 3) The QA/QC documentation Thad requested. This documentation was provided to us from the various laboratories in response to our recent request for QA/QC data.

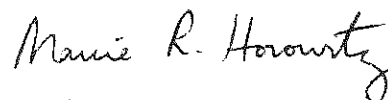
I note that the Rules of Practice contemplate a rather formal discovery process, and the production of the above documents should not be construed as a waiver of any of the discovery procedures set forth in 40 CFR Part 22. However, I generally prefer a more informal exchange of information, if possible, and trust that EPA will be similarly inclined under the circumstances.



John Tielsch, Esquire  
December 23, 1993  
Page 2

I appreciate your continuing cooperation in this matter. Please call me with any questions or comments.

Sincerely,

A handwritten signature in cursive script that reads "Marcie R. Horowitz". The signature is written in dark ink and is positioned above the printed name.

Marcie R. Horowitz

MRH:naw  
MRH01132  
Enclosures



# BARNES & THORNBURG

Marcie R. Horowitz  
(317) 231-7519

1313 Merchants Bank Building  
11 South Meridian Street  
Indianapolis, Indiana 46204  
(317) 638-1313

TWX 810-341-3427 B&T LAW IND  
Telecopier (317) 231-7433

December 9, 1993

John Tielsch, Esquire  
Assistant Regional Counsel (CS-3T)  
U.S. Environmental Protection Agency  
Region V  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

Re: Hoosier Spline Broach Corp.

Dear John:

This is to confirm our meeting on Monday, December 13, 1993 at 2:00 p.m. CST to discuss the above-referenced matter.

In preparation for our meeting, I thought it would be useful to summarize the results of an investigation carried out by and on behalf of Hoosier Spline Broach Corp. ("HSB") after EPA's complaint was filed last summer. This investigation confirms that the metal grinding waste generated at HSB's Kokomo, Indiana plant is not, and never has been, a hazardous waste. We believe that careful consideration of the facts will lead EPA to the same conclusion, and look forward to resolving this matter informally, without the need for a costly, time-consuming and unnecessary hearing.

HSB is a small, family-owned business that owns and operates a broach manufacturing plant in Kokomo, Indiana. As you may know, "broaches" are precision-ground steel cutting tools that are used, for example, in the automotive industry. HSB manufactures the broaches by cutting and grinding rods made of high-speed tool steel. High-speed tool steels are generally alloyed with molybdenum, and have a chromium content of 3.5 - 4.75%.

HSB generates two waste streams as a result of the broach manufacturing process -- a wet grinding sludge generated from a machine known as a "Blanchard" grinder and a dry grinding sludge. It is generally accepted in the broach and high-speed steel industries that sludges such as these do *not* exhibit the characteristics of a hazardous waste, and in particular, are *not* hazardous for chromium. (It is significant that none of HSB's known



competitors in the broach industry (all of whom do exactly what HSB does and many of whom are also located in Region V) has identified as a generator of a chromium-bearing hazardous waste, according to information provided to us in response to recent FOIA requests.) Indeed, HSB has consulted with experts in the field who know of no other instance in which similar waste has been found to be hazardous. Based on its knowledge of the waste, HSB concluded that its grinding sludges were not a hazardous waste, and in 1990 engaged the services of Waste Management of Central Indiana ("WMCI") to assist in HSB's attempt to certify the waste as a "special waste" under Indiana law. As a part of a nationally-known waste management empire, WMCI held itself out as an expert in waste management, and HSB reasonably relied on WMCI's advice and counsel.

In 1990 and 1991, WMCI collected four samples of HSB's grinding waste for analysis. The analyses revealed that two of the samples exceeded the 5 ppm TCLP limit for chromium.<sup>1</sup> The average of the four samples was 5.33 ppm chromium. At WMCI's counsel, these results were submitted to IDEM with a request to certify the waste as "special waste." On January 9, 1992, IDEM denied HSB's request on the ground that a RCRA statistical analysis of the four samples had shown that the waste was a D007 characteristic hazardous waste. IDEM concluded that "[t]he upper confidence level (alpha = .20) for the chromium is in excess of the hazardous waste level." See Attachment "A."

HSB did not challenge IDEM's conclusion. Instead, working on the assumption that WMCI and IDEM were correct, and out of an abundance of caution, HSB obtained an EPA identification number and arranged to dispose of the waste as a hazardous waste at the CWM/CID Landfill in Illinois, all at substantial cost to HSB.

---

<sup>1</sup>The TCLP results for chromium were reported as follows:

<u>Date</u>	<u>Laboratory</u>	<u>Result (ppm)</u>
10/17/90	NET Midwest, Inc.	5.8 <i>missing</i>
4/1/91	NET Midwest, Inc.	10.0 <i>missing</i>
✓9/11/91	Biological & Environmental Control Laboratories, Inc.	2.7 ✓
9/24/91	Biological & Environmental Control Laboratories, Inc.	2.8 ✓



After the initial data set was complete, HSB, still under the guidance of WMCI, collected five additional samples of its grinding sludge in 1992 and early 1993, which were analyzed by three separate laboratories engaged by WMCI. These samples showed even greater variability than the first data set and ranged from 0.15 ppm to 48.1 ppm chromium in the TCLP extract.<sup>2</sup> Four additional samples were analyzed at Barnes & Thornburg's request after this action was initiated by EPA.<sup>3</sup>

The variability and lack of apparent normality in the data set is surprising given what we know about HSB's waste. The steel from which the waste derives must meet rigid chemical specifications, and the chromium content of the steel varies only in a narrow and predictable range. Moreover, HSB has used the same types and brands of tool steel, in roughly the same proportions, over time. The waste consists of finely ground particles that would be expected to produce homogeneous samples. Finally, grinding sludges from broaching operations are not generally known or expected to be hazardous. For these reasons, we suspect that poor sampling and/or laboratory

---

<sup>2</sup>The results were as follows:

<u>Date</u>	<u>Laboratory</u>	<u>Result (ppm)</u>
7/7/92 ✓	Biological & Environmental Control Laboratories, Inc.	8.0
7/20/92 ✓	Biological & Environmental Control Laboratories, Inc.	0.15
7/24/92	Sherry Laboratories (Blanchard)	48.1 missing
7/24/92	Sherry Laboratories (O.D. Grinder)	3.2 missing
5/26/93	Chemical Waste Management, Inc.	27.8 missing

<sup>3</sup>The results were as follows:

<u>Date</u>	<u>Laboratory</u>	<u>Result (ppm)</u>
7/22/93	Security Resource Management, Inc. (wet)	.55
7/22/93	Security Resource Management, Inc. (dry)	.16
7/30/93	Heritage Laboratories, Inc. (wet)	1.0
7/30/93	Heritage Laboratories, Inc. (dry)	0.27



technique may have contributed to the wildly variable results. Whatever the cause, the result is that none of these data is sufficient to prove that HSB's waste is hazardous.

In fact -- as later study has borne out -- the sampling protocol utilized by WMCI and the statistical analysis performed by IDEM fall far short of the requirements of EPA SW-846, *Test Methods for Evaluating Solid Waste*, Volume II: Field Manual Physical/Chemical Methods (3rd Ed., November 1986). *Test Methods* makes clear that "analytical data generated by a scientifically defective sampling plan have limited utility, particularly in the case of regulatory proceedings." *Id.* at Nine-1.

To ensure that the sampling plan generates accurate, precise data, *Test Methods* provides a detailed strategy for determining if chemical contaminants in solid waste are present at hazardous levels. It is beyond the scope of this letter to enumerate every way in which the earlier sampling and analyses in this case fell short of the requirements of SW-846. As one example, however, I ask that you consider IDEM's "RCRA Statistical Analysis" of the data, which forms the underpinning of EPA's current action against HSB.

*Test Methods* directs that one must obtain a preliminary estimate of the mean ( $\bar{x}$ ) and variance ( $s^2$ ) for each constituent of concern. Then, one must estimate the appropriate number of samples ( $n_1$ ) to be collected from the waste. *Test Methods* states that "the appropriate number of samples is the least number of samples required to generate a sufficiently precise estimate of the true mean ( $\mu$ ) concentration of a chemical contaminant of a waste." *Id.* at Nine-10. The process involves a series of iterations and reiterations until one reaches even a *tentative* conclusion that a waste is hazardous.

Unfortunately, IDEM's statistical analysis of the data submitted on behalf of HSB went only so far as the *first step* in the *Test Methods* prescribed protocol. IDEM made a preliminary estimate of the mean (5.33) and variance (11.78) but *never* advanced to Step 2 -- it *never* estimated the appropriate number of samples ( $n_1$ ) that must be collected to generate a sufficiently precise estimate of the true mean.



Had IDEM (or anyone) performed Step 2, it would have discovered that the preliminary data set was woefully inadequate. Strict adherence to EPA's *Test Methods* would have required the collection of 290 samples before HSB's waste could be properly analyzed.<sup>4</sup> In short, the data simply cannot be relied upon to reach *any* conclusion whatsoever about HSB's waste -- yet both IDEM and EPA have used these data, and these data alone, to justify the imposition of heavy regulatory and financial burdens and to seek onerous penalties from HSB.

In an attempt to clarify the issue, we engaged SEACOR to perform a carefully controlled waste characterization study of HSB's grinding sludge. The study, which is enclosed, establishes that the grinding sludge does *not* exhibit the toxicity characteristic for chromium.

Unlike the previous, flawed sampling effort, SEACOR's results confirm not only that the waste contains very low levels of leachable chromium (means of 0.436 ppm and 0.155 ppm for each wastestream, respectively) but also that the waste exhibits low variability over time. This is consistent not only with the unvarying nature of HSB's raw materials and processes but also with the experience of the broach industry in general.

---

<sup>4</sup>The calculation is as follows:

$$n_1 = \frac{t^2_{.20} s^2}{\Delta^2}, \text{ with } \Delta = RT - x \text{ (Equation 8, } \textit{Test Methods}, \text{ p. Nine-3)}$$

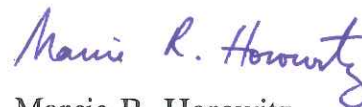
$$\begin{aligned} &= \frac{(1.638^2) (11.78)}{(.33)^2} \\ &= 290 \text{ samples} \end{aligned}$$



John Tielsch, Esquire  
December 9, 1993  
Page 6

In short, HSB's grinding sludge is not, and never has been, a hazardous waste. We are prepared to introduce expert testimony in support of HSB's position should a hearing become necessary in this case. I am hopeful, however, that upon review of the enclosed information, EPA will reevaluate its position. We look forward to discussing these issues further on Monday, and appreciate your consideration of this matter.

Sincerely,



Marcie R. Horowitz

MRH:naw  
MRH01105  
Attachment





NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

Indianapolis Division  
6964 Hillsdale Ct.  
Indianapolis, IN 46250  
Tel: (317) 842-4261  
Fax: (317) 842-4286

September 02, 1993

HOOSIER SPLINE BROACH CORP.  
P.O. Box 538  
Kokomo, IN 46903-0538

Dear Diane:

Enclosed please find the supporting Quality Control data for the TCLP Chromium analyses we spoke of. I have included copies of the analytical report, the TCLP EXtraction Log Book, a QA/QC Data Summary, and raw analytical data for each sample. I received verbal permission to release this information from Greg Westfall of Byers Recycling & Disposal on 09/02/1993.

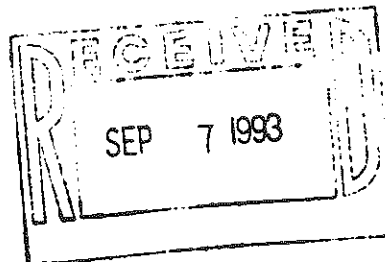
Upon review of the data, I found an error on the analytical report for sample number 36781. The reported concentration of TCLP - Chromium was 10. mg/L and it stated on the report that the result had been adjusted to reflect spike recovery. The reported concentration had not been adjusted to reflect spike recovery. The spike recovery observed was 70%; therefore, the adjusted concentration for TCLP - Chromium is 14. mg/L.

If you have questions or you need further information, please contact me at any time.

Thank you,

*Beth Day*

Beth Day  
Quality Assurance Coordinator







NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

NET Midwest, Inc.  
Indianapolis Division  
6964 Hillside Court  
Indianapolis, IN 46250  
Tel: (317) 842-4261  
Fax: (317) 842-4286

## ANALYTICAL REPORT

Pat Russell  
BYERS RECYCLING & DISPOSAL  
R R #3 Box 365B  
Logansport, In 46947

12-06-90

Sample No.: 30267

P.O. NO.: 547558

Page 1

Sample Description: WMA035621 HOOSIER SPLINE BROACH

Date Taken: 10-17-90

Date Received: 10-24-90

<u>Parameters</u>	<u>Results</u>	<u>Units</u>
Solids, Total	93.	%
Water (Paint Filter)	No Free Liquid	
Ignitability	Will Not Ignite.	Degree C
Reactive Sulfide	<1.	ug/g
Reactive Cyanide	<0.05	ug/g
TCLP - Arsenic	<0.4	mg/L
TCLP - Barium	0.5	mg/L
TCLP - Cadmium	<0.02	mg/L
TCLP - Chromium	5.8	mg/L
TCLP - Copper	0.03	mg/L
TCLP - Lead	<0.1	mg/L
TCLP - Mercury	<0.002	mg/L
TCLP - Nickel	3.2	mg/L
TCLP - Selenium	<1.	mg/L
TCLP - Silver	<0.05	mg/L
TCLP - Zinc	0.28	mg/L
TCLP - VOLATILES		
Benzene	<10.	ug/L
Carbon tetrachloride	<10.	ug/L
Chlorobenzene	<10.	ug/L
Chloroform	<10.	ug/L
1,2-Dichloroethane	<10.	ug/L
1,1-Dichloroethene	<10.	ug/L
Tetrachloroethene	<10.	ug/L
Trichloroethene	<10.	ug/L
Vinyl chloride	<100.	ug/L
Methyl ethyl ketone	<100.	ug/L

These results have not been corrected for spike recoveries.

*Karen Groleau*  
Karen Groleau  
Project Manager





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## ANALYTICAL REPORT

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R R #3 Box 365B  
Logansport, In 46947

12-06-90

Sample No.: 30267

P.O. NO.: 547558

Page 2

Sample Description: WMA035621 HOOSIER SPLINE BROACH

Date Taken: 10-17-90

Date Received: 10-24-90

<u>Parameters</u>	<u>Results</u>	<u>Units</u>
TCLP - SVOA		
1,4-Dichlorobenzene	<66.	ug/L
2,4-Dinitrotoluene	<66.	ug/L
Hexachlorobenzene	<66.	ug/L
Hexachlorobutadiene	<66.	ug/L
Hexachloroethane	<66.	ug/L
Nitrobenzene	<66.	ug/L
Pyridine	<66.	ug/L
2,4,6-trichlorophenol	<66.	ug/L
Pentachlorophenol	<330.	ug/L
2,4,5-trichlorophenol	<66.	ug/L
Cresol	<66.	ug/L
PCB's		
PCB-1016	<0.1	ug/g
PCB-1221	<0.1	ug/g
PCB-1232	<0.1	ug/g
PCB-1242	<0.1	ug/g
PCB-1248	<0.1	ug/g
PCB-1254	<0.1	ug/g
PCB-1260	<0.1	ug/g
SURROGATE RECOVERY		
Dibutylchloroendate	80.	%

These results have not been corrected for spike recoveries.

*Karen Groleau*

Karen Groleau  
Project Manager



## TCLP AND ZHE EXTRACTION RECORD

PAGE NO. 1

NET Sample No.	30260	30262	30263	30267	
Matrix	N/A Solid	N/A Solid	N/A Liquid	N/A Solid	
ZHE #					
SOLIDS DETERMINATION					
Wt. of sample (A)			228		
Wt. of empty beaker (B)			101		
Wt. of beaker + collected filtrate (C)			294		
Total Solids % = $100 - (C-B/A \times 100)$			15.4		
EXTRACTION FLUID DETERMINATION					
pH 1 (5g smp + 96.5 mL D.I., stir for 5 min.)	7.60	8.45	8.59	7.50	
pH 2 (If pH 1 is >5.0 add 3.5 mL 1N HCL, heat for 10 min., cool)	1.72	5.41	5.01	5.52	
pH 3 (If pH 1 is <5.0, use extraction fluid #1)					
Extraction fluid to be used	1	2	2	2	
Wt. of original sample prior to filtration			228g		
Wt. of solids after filtration			35g		
Addition of extraction fluid = $20 \times$ Wt. of solid			700		
Date/Time Started	10-24-90 2:00PM	10-24-90 2:00PM	10-24-90 2:00PM	10-24-90 2:00PM	
Date/Time Completed	10-25-90 8:00am	10-25-90 8:00am	10-25-90 8:00am	10-25-90 8:00am	
Final pH	4.86	4.85	4.60	6.89	
Filtrate Volume			193		
Extract Volume			700		

Analyst Signature R. M. C. DoleDate 10-25-90 Notes30267 Spike Metals





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### INORGANIC QA/QC DATA

Client Name: BYERS RECYCLING & DISP.  
Project ID : WMA 035621 HOOSIER SPLINE BROACH  
NET Lab No.: 30267

Parameter	Date Analyzed	Method Blk. mg/L	Accuracy				Precision		
			SSR	SR	SC	% Rec.	MS/Sample	MSD/Dup.	RPD
TCLP-Cr	11-13-90	<0.04	1.09	0.58	0.50	102	*	*	*

Definition of Terms:

SSR - Spiked Sample Result, mg/L  
SR - Sample Result, mg/L  
SC - Spike Concentration, mg/L  
MS - Matrix Spike  
MSD - Matrix Spike Duplicate

Comments: NO DUPLICATE OR MSD ANALYZED - RPD INFORMATION UNAVAILABLE.

QA/QC Data Reviewed By: Beth Day Date: 8-31-93







1	30427			0.012		11876		
	27	45		0.026	0.88	10476	0.36	
	428			0.017				
	28	45		0.033	1.13	11776	0.55	
	429			0.019				
	29	45		0.032	1.09	9476	0.62	
Cu	B							
	0.50	0.033						
	1.00	0.062						
	3.00	0.185						
	15TB							
	B			0.063				
	30427			0.000			1.01	1017
	27	45		0.004				
	428			0.031	0.47	9576	0.03	
	28	45		0.003				
	429			0.030	0.46	9270	<0.02	
	29	45		0.000				
Pb	B			0.032	0.49	9876	<0.02	
	0.50	0.011		0.000				
	1.00	0.023						
	3.00	0.067						
	30328							
	28	45		0.000				
				0.014			<0.1	
Cu	B							
	0.25	0.008						
	0.50	0.016						
	1.00	0.033						
	15TB	0.50						
	B			0.015				
				0.000			0.46	928

notes

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\*mg/L unless otherwise noted

**NET**

Analyst:

*HR*

Date:

11-13-90



# ATOMIC ABSORPTION

98

Metal	Spl No.	std abs	conc set	abs or conc	abs-blank	dilution	digestion wt/vol	Result	mg/L
Cu	30267			0.019	0.58	X10	e/	5.8	
	67	45		0.036	1.09		10274		
	30427			0.003			/	<0.06	
	27	45		0.013	0.40		8070		
	428			0.002			/	<0.06	
	28	45		0.014	0.43		8670		
	429			0.000			/	<0.06	
	29	45		0.015	0.46		9270		
	29820			0.016	0.49	X10	2.227/1x45	220.	49/1g
	21			0.027	0.82	X100	1.397/1x76	6200.	49/1g
	29833			0.013	0.40	X10	2.54/1x39	156.	49/1g
	33			0.018	0.55	X100	1.087/1x92	5100.	49/1g
	30933			0.029	0.88	X10	1077/1	88.	
	33	45					/		
	934			0.023	0.70	X10	/	70.	
	34	45					/		
	31066			0.013	0.40		2.587/1x38	15.	49/1g
	67			0.010	0.31		2.057/1x48	14.	49/1g
Cd	B						/		
	B						/		
	0.25	0.054					/		
	0.50	0.106			.998		/		
	1.00	0.202					/		
	VSTB			0.104			/	0.51	
	B			0.000			/		
	30427			0.083			/	0.39	
	27			0.175	0.85		9374		
	428			0.156			/	0.76	
	28			0.242	1.20		8874		
	429			0.099			/	0.47	
	29			0.188	0.92		9170		
	30141			0.010			/	0.02	

notes

\*mg/L unless otherwise noted

**NET**

Analyst:

HR

Date:

11-13-90



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

## OFFICE MEMORANDUM

**TO:** Jim Hunt, Chief  
Compliance Monitoring

**DATE:** January 9, 1992

**FROM:** Tracy Barnes *TJB 1/9/92*

**THRU:** George Oliver, Chief *GO 1/9*  
Special Projects

**SUBJECT:** Hoosier Spline Broach Corporation, Kokomo, Indiana

Hoosier Spline submitted a Special Waste Certification Application on November 7, 1991 for grinding sludge. In reviewing the analysis, we determined that the grinding sludge was hazardous. Four samples were analyzed and the upper confidence level for chromium exceeds the hazardous waste level. The sample description from Biological and Environmental Control Laboratories stated that the sample was from a "pile in back of the building". I spoke with Mr. Gilbert Larison of Hoosier Spline Broach Corporation and he confirmed that they do have a "pile" of the grinding sludge in the back of the building. The application and analytical data can be found in the 2D1 file.



# Special Waste Certification Application

Indiana Department of  
Environmental Management  
Office of Solid and Hazardous Waste Management  
105 South Meridian Street  
Indianapolis, Indiana 46206  
Telephone: 317/232-4473


## For Office Use Only

Case No. 11108

Reviewer \_\_\_\_\_

Generator Information	
Generator Mailing Address	Generator Facility Location
Name Hoosier Spline Broach Corp	Name Hoosier Spline Broach Corp.
Address P.O. BOX 538	Address 1401 TOUBY PIKE
Kokomo / IN / 46903- (City) (State) (Zip) 0538	KOKOMO / IN / 46901 (City) (State) (Zip)
County HOWARD	County HOWARD
Technical Contact and Telephone # Gilbert Larison 317-452-8273	Contact and Telephone # Gilbert Larison 317-452-8273

Waste Information
Waste Name: GRINDING SLUDGE
Brief description of the process generating the waste: EXCESS FROM GRINDING WHEELS AND METAL
Anticipated quantity (cubic yards, drums, other): 125 yds
Disposal Frequency (weekly, monthly, annually, one time, etc.): annually
Type of waste containers (drums, bulk, rollofs, etc.): roll-off
Proposed disposal site: BYERS LANDFILL

Generator Signature		
I hereby certify that the information in this application is true and accurate to the best of my knowledge, and that this waste is not a hazardous waste as defined in 329 IAC 3.		
	GILBERT LARISON	10-28-91
Signature	(type or print name)	Date
Title	PRESIDENT	



# Special Waste Certification Application

Cashier, Room N1324

Indiana Department of Environmental Management

Office of Solid and Hazardous Waste Management

100 N. Senate Avenue

P.O. Box 6015

Indianapolis, Indiana 46206-6015

Telephone: 317/232-3111

**For Office Use Only**

Reviewer Ritchotte

## 1. Generator Fee

Generator Fee: \$250.00 per waste stream

PAID BY: CHECK #13185

(Check # or Money Order #)

TOTAL AMOUNT SUBMITTED: \$ 250.00

## 2. Generator Information

Generator Facility Location		Generator Mailing Address	
Name	HOOSIER SPLINE BROADB CORP	Name	HOOSIER SPLINE BROADB CORP
Address	1401 TOWBY PIKE	Address	1401 TOWBY PIKE
	P.O. BOX 538		P.O. BOX 538
	KOKOMO IN 46903-0538		KOKOMO IN 46903-0538
(City)	(State) (Zip)	(City)	(State) (Zip)
County	HOWARD	County	HOWARD
Technical Contact and Telephone #		Technical Contact and Telephone #	
GILBERT LARISON, PRES. 317-452-8273		GILBERT LARISON, PRES. 317-452-8273	
EPA Identification Number:			

## 3. Contractor Information

Applicant (if other than generator)		Proposed Disposal Site	
Name		Name	BYERS LANDFILL Opp No.
Address		Address	P.O. BOX 1038
	LOGANSPORT IN 46947		
(City)	(State) (Zip)	(City)	(State) (Zip)
County	CASS	County	CASS
Technical Contact and Telephone #		Technical Contact and Telephone #	
		KARYN HARMON 219-722-5771	

## 4. Regulatory Issues

Are any of the following occurring at your facility: (please check)

CERCLIS Clean-up ☐

Hazardous/Solid Waste Enforcement ☒

Corrective Action ☐

Air/Water Issues ☐

No Issues ☐

Other \_\_\_\_\_

RECEIVED  
NOV 14 1994  
OFFICE OF RCRA  
WASTE MANAGEMENT DIVISION  
EPA, REGION V



**5. Waste Information**

Waste Name: WET GRINDING SLUDGE PRIMARILY FROM BLANCHARD MACHINE  
 Anticipated annual quantity (cubic yards, drums, other): 25-35 DRUMS  
 Disposal frequency (weekly, monthly, annually, one time, etc.): 1-3 TIMES PER YEAR  
 Type of waste containers (drums, bulk, rollofs, etc.): DRUMS

**6. Sampling and Laboratory Information**

Laboratory		Sample Collector	
Name HERITAGE LABORATORIES, INC.		Name SEACOR - JOHNNIE R BAKER	
Address 7901 WEST MORRIS STREET		Address 8770 GULION ROAD	
		SUITE L	
INDIANAPOLIS	IN 46231	INDIANAPOLIS	IN 46268
(City)	(State) (Zip)	(City)	(State) (Zip)
Technical Contact and Telephone#		Telephone #	
KURT MAINES 317-243-0811		317-876-8375	

**7. Previous Certification Information**

Has this waste been certified previously? Yes \_\_\_ No ☒ Date: \_\_\_ Certification No. \_\_\_

What is the date of the last lab analysis? OCTOBER 20, 1993

Have there been any changes in the process, volumes, or raw materials since the last certification?  
 Yes \_\_\_ No \_\_\_ If yes, attach a brief explanation.

Are you aware of any other facts or circumstances which have, or could have, altered the physical characteristics or chemical composition of the waste? Yes \_\_\_ No \_\_\_  
 If yes, provide a brief explanation.



### 8. Waste Characterization

Is the waste a listed hazardous waste as defined in 329 IAC 3.1? Yes \_\_\_ No X

Does this waste contain PCB's or PCB items as defined in 329 IAC 4? Yes \_\_\_ No X

#### Physical Characteristics: (attach MSD Sheets if Available)

Physical state: SOLID

Percent solids 90%

Fire, explosion, or spontaneous ignition hazard? Yes \_\_\_ No X

Does this waste contain: Free liquids? NO Asbestos? NO Solvents? NO

Odor? None X Mild \_\_\_ Strong \_\_\_ Describe: \_\_\_

#### Analytical Information

Sampling: Date sample was collected: 4-28-94 Sample type: grab \_\_\_ composite \_\_\_

Was a sampling plan used? Yes \_\_\_ No X If so, attach a copy.

Is the sample representative of the waste? YES

Results: attach original laboratory documentation i.e. TCLP (metal, pesticide, organics), corrosivity, ignitability, reactivity, or other. (QA/QC upon request)

### 9. Process Description (attach additional pages if necessary)

THIS GRINDING SLUDGE IS GENERATED FROM THE MACHINING OF STEEL STOCK USING PRIMARILY A BLANCHARD MACHINE. THIS GRINDING PROCESS UTILIZES AN ABRASIVE GRINDING PRODUCT IN A WET PROCESS USING A WATER SOLUBLE COOLANT, CIMTECH 400. A MATERIAL SAFETY DATA SHEET (MSDS) FOR CIMTECH 400 IS INCLUDED FOR REFERENCE. THE WETTED GRINDINGS ARE ALLOWED TO DEWATER BY GRAVITY PRIOR TO BEING PLACED INTO 55 GALLON DRUMS. THE RESULTING GRINDING SLUDGE DOES NOT CONTAIN ANY FREE LIQUIDS. THE WASTE IS GREY IN COLORING AND CONSISTS OF FINE METAL GRINDINGS. THE WASTE IS SEGREGATED FROM THE DRY GRINDING PROCESS WASTE.

### 10. Generator Signature

I hereby certify that the information in this application is true and accurate to the best of my knowledge, and that this waste is not a hazardous waste as defined in 329 IAC 3.1.

Signature

GILBERT LARISON

8-15-94

(type or print name)

Date

Title

PRESIDENT



**CINCINNATI  
MILACRON**

# MATERIAL SAFETY DATA SHEET

PRINTED: February 9, 1992  
DATE EFFECTIVE: 12/91  
MSDS Number: 291

**GENERAL SUPPLY CO.**  
1701 Kilgore Avenue  
Muncie, IN 47304  
(317) 281-1157

**CIMTECH® 400**

OCT - 5 1993



## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name(s):</b>	<b>Product Code(s):</b>	<b>Manufacturer:</b>	<b>Emergency Telephone Number</b>
CIMTECH 400	Undyed . . . . . 291	Products Division/ Cincinnati Milacron	513-841-8181
CIMTECH 400	Pink . . . . . 292	Marketing Company	
CIMTECH 400	Blue . . . . . 293	4701 Marburg Avenue Cincinnati, OH 45209	<b>Information Telephone Number</b> 513-841-8964
<b>Generic Name:</b> Water-based metalworking fluid concentrate			

## 2. EMERGENCY OVERVIEW

Product is a clear liquid which may be dyed.  
Product is alkaline and a primary eye irritant.  
Highway spills in rainy weather could result in slippery road conditions.

No other significant health effects are associated with this material. Product concentrate is corrosive to aluminum. UN1760

## 3. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS Number	Max %
Ethanolamine	141-43-5	10
Neodecanoic acid	26896-20-8	10
Aminomethylpropanol	124-68-5	10
Heptanoic acid	111-14-8	10
Pelargonic acid	112-05-0	10
Triethanolamine	102-71-6	10

These ingredients may contribute to the acute product hazards listed under the Potential Health Effects section. Other substances, not "Hazardous" under the OSHA Hazard Communication Standard may be present. Further composition information may be made available to health professionals as provided in the standard.

## 4. HAZARDS IDENTIFICATION

### Potential Health Effects of Direct Exposure

	Product Concentrate	Product at Use Dilution
Inhalation	Not Applicable	Extended Exposure to mists may cause upper respiratory irritation
Eye Contact	Primary eye irritant	Will cause stinging sensation in the eye
Skin Contact	Not a primary skin irritant	Not irritating to the skin when used as directed and good personal hygiene is practiced
Ingestion	Not orally toxic	Swallowing small quantities may cause nausea or diarrhea

Toxicity data are available. Call 513-841-8964 (Health Information)



## HAZARDS IDENTIFICATION (cont.)

When used in applications generating high levels of mist, operator exposure can be minimized by proper ventilation, use of mist collectors or splash guards, as appropriate. If there is doubt about actual mist levels present, monitoring should be conducted.

Mild skin irritation (redness and dryness of hands) may be experienced when the diluted product has been contaminated by certain oils, by dissolved metals or when mix ratio is too strong. When problems occur, use of water-resistant barrier creams may be a temporary control measure. Contact Cimcool Technical Services (513-841-8133) for specific recommendations.

**Carcinogen Listings**

NTP: No IARC: No OSHA: No

**Signs and symptoms of exposure:** Eye injury may result from contact with concentrated product. Skin irritation can result from improper use and handling of concentrate or mix.

**Medical conditions generally aggravated by exposure:** May aggravate existing skin irritation where further defatting or skin penetration could occur.

## 5. EMERGENCY AND FIRST AID PROCEDURES

**Eyes** -- In case of eye contact with concentrated product or diluted mix, flush immediately with running water for 15 minutes, then promptly get medical attention to check for possible irritation.

**Skin contact**-- In case of skin contact with product concentrate, wash with water as soon as possible.

Diluted product is not irritating to the skin when used as recommended and good personal hygiene is practiced. Remove severely contaminated clothing, including shoes. Launder before reuse. If irritation persists, get medical attention.

**Ingestion**-- If concentrate or mix is swallowed, do not induce vomiting. Dilute by drinking water or milk. Immediately contact physician and obtain treatment.

Swallowing small quantities of diluted product is not expected to cause injury or illness; but, as should be expected when drinking oily, soapy water, nausea, diarrhea or abdominal distress may be experienced.

**Inhalation**-- Not expected to be a probable route of exposure to product concentrate.

Inhalation of diluted mix can occur in applications where high mist levels are generated. OSHA has set a PEL of 15 mg/M<sup>3</sup> for any airborne particulate as a nuisance level of exposure.

## 6. FIRE AND EXPLOSION HAZARD DATA

Flash Point (COC)	NA	NFPA/HMIS Codes
Flammable Limits	NA	Health . . . . . 1
Lower Explosive Limit	NA	Flammability . . 0
Upper Explosive Limit	NA	Reactivity . . . . 0
Extinguishing Media	NA	Other . . . . . NA
Special Firefighting Procedures	None	
Unusual Fire and Explosion Hazards	None	
Hazardous Combustion Products	Smoke, fumes and oxides of carbon	

## 7. ACCIDENTAL RELEASE MEASURES

Contain the spill, collect on absorbent material and discard as dictated by Federal, state and local regulations that may apply. Flush area thoroughly with water.

**Reportable Quantity** . . . . . None



## 8. WASTE DISPOSAL

**For Used Mix:** Disposal procedures must comply with local, county, state and Federal regulations. If pre-treatment is needed, chemical emulsion breaking or ultrafiltration may be used. Contact Cimcool Technical Services (513-841-8133) for assistance.

**For Unused Concentrate:** Concentrate is not a hazardous waste, as defined under 40 CFR 261.

Cimcool Technical Services (513-841-8133) can provide a list of waste haulers for your area.

"Empty" Containers will contain a residue which is not considered a hazardous waste under RCRA regulations. Drums can be drained to a "drip dry" condition by inversion and can be offered for recycling or scrap.

## 9. HANDLING AND STORAGE

Use only as recommended by CINCINNATI MILACRON. Avoid all contact of concentrate with eyes or skin. Do not swallow. If frozen, product separates. Thaw completely at room temperature and stir thoroughly.

**Other Precautions** -- Contains amines. Do not add sodium nitrite or other nitrosating agents to this product. Suspected cancer-causing nitrosamines could be formed.

## 10. CONTROL MEASURES

**Respiratory Protection**-- Product is not volatile.

**Ventilation**-- For most applications, normal shop ventilation is adequate. However, when high mist levels are generated or where machines are close together or ventilation is inadequate, operators may experience respiratory irritation. For such applications, use of splash guards or mist collectors is recommended.

**Protective Gloves**-- Impervious gloves are required when handling product concentrate.

**Eye Protection**-- Safety shield or goggles required when handling concentrated product.

**Other protective clothing or equipment**-- Effective metalworking plant protective clothing as appropriate.

**Work/Hygiene Practices**-- Good personal hygiene should always be followed.

## 11. PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point . . . . . 212° F  
Specific Gravity . . . . . 1.0582  
Vapor Pressure (mm Hg) . . . . . Like water  
Melting Point . . . . . NA  
Vapor Density . . . . . NA

Evaporation Rate . . . . . Like water  
Solubility in Water . . . . . 100% miscible  
Appearance/Odor . . . . . Clear/chemical  
pH (concentrate) . . . . . 9.5 - 9.8  
pH (5% mix) . . . . . 8.8 - 9.2

## 12. REACTIVITY

Stability . . . . . Stable  
Conditions to Avoid . . . . . NA  
Materials to Avoid . . . . . Avoid addition of strong acids to product concentrate.

Hazardous Polymerization . . . . . Will not occur.  
Combustion Products . . . . . Smoke, fumes, oxides of carbon.

## 13. TRANSPORT INFORMATION

DOT Proper Shipping Name . . . . . Corrosive Liquid, n.o.s. (contains ethanolamines), PG III

ID Number . . . . . UN1760

DOT Hazard Classification . . . . . Corrosive

U.S. Harmonized Tariff Schedule Code:  
3403.99.00.00.9



## 14. REGULATORY INFORMATION

## Exposure Guidelines

<u>Regulated Material</u>	<u>OSHA PEL</u>	<u>OSHA STEL</u>	<u>ACGIH TLV</u>	<u>ACGIH STEL</u>
Ethanolamine	3 ppm	---	3 ppm	6 ppm

## CERCLA

Components present in this product at a level which could require reporting under 40 CFR 302.4 . . . . . None

## SARA TITLE III

Extremely Hazardous Substances (302) . NA

## Hazardous Substances (311,312):

Product concentrate is a hazardous substance as defined under the OSHA Hazard Communication Standard and may be reportable under the provisions of SARA Sections 311 and 312.

## SARA Hazard Categories

Acute Health	Yes
Chronic Health	No
Fire	No
Sudden Release of Pressure	No
Reactive	No

## RCRA

Product concentrate does not meet the definition of a hazardous waste as defined under 40 CFR 261. It is possible that in use, the mix may be contaminated by metals or by chlorinated solvents and the final waste may meet the TCLP definition. Each facility should assess each waste stream to determine if the used fluid should be treated as a hazardous waste.

TSCA-- The ingredients of this product are on the TSCA inventory.

## State Right-to-Know

Many states have enacted Community Right-To-Know laws which require information beyond that mandated by federal laws. Since some of these laws are inconsistent with the federal laws, the information in this sheet may not fully meet the requirements of every state.

California SCAQMD Rule 443.1 VOC's . . NA

Toxic Substances (313): Components present in the product at levels which could require reporting under the statute:

<u>Chemical Name</u>	<u>CAS #</u>	<u>Max %</u>
NA		

## Glossary of Abbreviations

ACGIH . . . American Conference of Governmental Industrial Hygienists	OSHA . . . Occupational Safety and Health Administration
CAS . . . Chemical Abstracts Service	PEL . . . . Permissible Exposure Limit
CERCLA . . . Comprehensive Environmental Response Compensation and Liability Act	RCRA . . . . Resource Conservation and Recovery Act
CFR . . . Code of Federal Regulations	SARA . . . . Superfund Amendments and Reauthorization Act
COC . . . Cleveland Open Cup	SCAQMD . . . Southern California Air Quality Monitoring District
DOT . . . Department of Transportation	STEL . . . . Short-Term Exposure Limit
IARC . . . International Agency for Research on Cancer	TCLP . . . . Toxicity Characteristics Leaching Procedure
NA . . . . Not Applicable	TLV . . . . Threshold Limit Value
NTP . . . National Toxicology Program	TSCA . . . . Toxic Substances Control Act
	VOC . . . . Volatile Organic Chemicals

NOTE: The opinions expressed herein are those of qualified experts within CINCINNATI MILACRON and of their suppliers. We believe that the information contained herein is current as of the date of this Material Data Sheet. Since the use of this information and of these opinions and the condition and use of the product are not within the control of CINCINNATI MILACRON, it is the user's obligation to determine the conditions of safe use of the product.

This is the last page



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BROACH CORP.; Kokomo, IN  
Sample I.D.: 42894A Sample Control No.: A309692  
Sample Location: GRINDING SLUDGE FROM BLANCHARD MACHINE  
Sample Date: 04/28/94 Time Sampled: 11:15 AM PM

Field Test(s) Performed	Result	Sample Types (circle all applicable):			
_____	_____	Mon. Well	Res. Well	Mun. Well	Ind. Well
_____	_____	Leachate	Creek	River	Ditch
_____	_____	Lagoon	Lake	Pond	Sediment
_____	_____	Soil	Sludge	Sand	Ind. Waste
_____	_____	Solid	Oil	Other	_____
_____	_____	Blank (Equipment/Trip/Field)		Background	

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic	_____	H <sub>2</sub> SO <sub>4</sub> (50%)	_____
1 L glass	_____	HNO <sub>3</sub> (conc.)	_____
500 ml glass	_____	NaOH (50%)	_____
40 ml vial	_____	Zinc Acetate (2N)	_____
250 ml plastic	_____	Other	_____
1L amber glass	<u>2</u>	Sample Iced	_____
Other	_____	* No preservatives used for non-aqueous samples	

Additional Sample Location Information:

Sample was placed into clean sample containers provided by HERITAGE LABS.  
Containers were tightly sealed and properly labeled. Collected directly  
from drummed wastes generated by Blanchard Machine

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted of a mixture of fine-medium sized grindings.  
No free liquids were present.

Sampling Equipment Used: A new teflon scoop was used to collect a composite sample  
from 2 drums of the waste from the Blanchard Machine.

Deviations from Sampling Plan: \_\_\_\_\_

Signature of Sampler: J. R. B.



TO ENSURE PROPER HANDLING OF SAMPLES PLEASE COMPLETE THIS ENTIRE FORM

**HERITAGE LABORATORIES, INC.**

7901 West Morris Street

Indianapolis, Indiana 46231 (317) 243-0811 Fax (317) 486-5095

I - № 19601

[illegible]



# CERTIFICATE OF ANALYSIS

Service Location <b>HERITAGE LABORATORIES, INC.</b> 101 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	Received <b>02-MAY-94</b>	Project <b>2920</b>	Lab ID <b>A309692</b>
	Complete <b>13-MAY-94</b>	PO Number <b>R0027-001-01</b>	
	Printed <b>13-MAY-94</b>	Sampled <b>28-APR-94 11:15</b>	

Report To  <b>JOHNIE R. BAKER</b> <b>SEACOR</b> <b>P.O. BOX 68178</b> <b>8770 GUION ROAD SUITE L</b> <b>INDIANAPOLIS, IN 46268-7178</b>	Bill To  <b>JOHNIE R. BAKER</b> <b>SEACOR</b> <b>P.O. BOX 68178</b> <b>INDIANAPOLIS, IN 46268-7178</b>
---	---

Sample Description  <b>SAMPLE ID: 42894A</b> <b>DESCRIPTION: GRINDING SLUDGE BLANCHARD MACH</b>
--

<b>TOTAL SOLIDS EPA 160.3</b> Analyst: B. PRIDEMORE      Analysis Date: 02-MAY-94      Test: G401.7.0				
Parameter	Result	Det. Limit	Units	
<b>SOLIDS</b>	<b>91</b>	<b>0.001</b>	<b>Percent</b>	

<b>PH (S/S/S) SW846-9045A</b> Analyst: D. NEWHART      Analysis Date: 03-MAY-94      Test: G624.0.0				
Parameter	Result	Det. Limit	Units	
	<b>8.0</b>	<b>0.1</b>	<b>Std. Units</b>	
<i>20 grams/60 mL -- Used for analysis of pH</i>				

<b>PAINT FILTER TEST SW846-9095</b> Analyst: C. CALVERT      Analysis Date: 05-MAY-94      Test: G103.1.0				
Parameter	Result	Det. Limit	Units	
<b>PAINT FILTER LIQUID (TOTAL ML AFTER 5 MINUTES)</b>	<b>0</b>		<b>mL</b>	
<b>INITIAL SAMPLE WEIGHT</b>	<b>100</b>		<b>Grams</b>	

<b>TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311</b> Analyst: C. CALVERT      Analysis Date: 03-MAY-94      Test: P106.1.0				
Parameter	Result	Det. Limit	Units	
<b>TOTAL SAMPLE WEIGHT</b>	<b>100</b>		<b>Grams</b>	
<b>LIQUID FRACTION (GRAMS)</b>	<b>0</b>		<b>Grams</b>	
<b>EXTRACTED SAMPLE</b>	<b>100</b>		<b>Grams</b>	
<b>SOLIDS</b>	<b>100</b>		<b>Percent</b>	
<b>9.5 MM SIEVE TEST</b>			<b>Passed</b>	
<b>INITIAL PH</b>	<b>8.01</b>		<b>Std. Units</b>	
<b>ADJUSTED PH</b>	<b>3.02</b>		<b>Std. Units</b>	
<b>BUFFER SOLUTION PH</b>	<b>4.90</b>		<b>Std. Units</b>	
<b>FINAL PH</b>	<b>6.08</b>		<b>Std. Units</b>	
<b>VOLUME BUFFERED SOLUTION</b>	<b>2000</b>		<b>mL</b>	
<b>VOLUME EXTRACT FILTERED</b>	<b>2000</b>		<b>mL</b>	
<b>VOLUME LIQUID (ADD BACK)</b>	<b>0</b>		<b>mL</b>	
<b>TOTAL VOLUME FILTRATE</b>	<b>2000</b>		<b>mL</b>	
<b>AMBIENT TEMPERATURE</b>	<b>23</b>		<b>Degrees C</b>	
<b>INITIAL TIME</b>	<b>12296.4</b>		<b>HRS</b>	
<b>FINAL TIME</b>	<b>12312.5</b>		<b>HRS</b>	



Parameter	Result	Det. Limit	Units
PHASE 0 VOLUME (REP 0)			mL
PHASE 0 WEIGHT			Grams
PHASE 0 DENSITY			g/mL
PHASE 1 VOLUME (REP 1)			mL
PHASE 1 WEIGHT			Grams
PHASE 1 DENSITY			g/mL

**FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A**

Analyst: G. CARTER

Analysis Date: 04-MAY-94

Test: P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

**BARIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M604.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
BARIUM	0.88	0.050	mg/L
ADDITION 1	2.00		mg/L
SAMPLE	0.1766		Conc
SAMPLE + ADD 1	2.149		Conc
DILUTION	5		

**CADMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M608.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.025	mg/L
ADDITION 1	2.0		mg/L
SAMPLE	0.0029		Conc
SAMPLE + ADD 1	1.930		Conc
DILUTION	5		

**CHROMIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M610.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
CHROMIUM	0.054	0.050	mg/L
ADDITION 1	2.0		mg/L
SAMPLE	0.0108		Conc
SAMPLE + ADD 1	1.982		Conc
DILUTION	5		

**LEAD ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER

Analysis Date: 04-MAY-94

Instrument: ICP

Test: M616.7.0

Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0

Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.25	mg/L
ADDITION 1	2.00		mg/L
SAMPLE	0.0262		Conc
SAMPLE + ADD 1	1.863		Conc
DILUTION	5		



**SILVER ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER Analysis Date: 04-MAY-94 Instrument: ICP  
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Test: M630.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.050	mg/L
ADDITION 1	0.400		mg/L
SAMPLE	-0.0039		Conc
SAMPLE + ADD 1	0.3501		Conc
DILUTION	5		

**ARSENIC ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER Analysis Date: 04-MAY-94 Instrument: ICP  
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Test: M603.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.50	mg/L
ADDITION 1	2.00		mg/L
SAMPLE	0.0165		Conc
SAMPLE + ADD 1	1.991		Conc
DILUTION	5		

**SELENIUM ICP (1 POINT MSA) SW846-6010A**

Analyst: A. HILSCHER Analysis Date: 04-MAY-94 Instrument: ICP  
 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Test: M628.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	1.0	0.50	mg/L
ADDITION 1	2.00		mg/L
SAMPLE	0.2061		Conc
SAMPLE + ADD 1	2.257		Conc
DILUTION	5		

**MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470**

Analyst: K. BUCKNER Analysis Date: 05-MAY-94  
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Test: P131.9.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		mL
FINAL VOLUME	100		mL

**MERCURY CVAA (1 POINT MSA) SW846-7470**

Analyst: K. BUCKNER Analysis Date: 05-MAY-94 Instrument: CVAA  
 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470 P131.9.0  
 Prep: TOX CHAR LEACHING PROCEDURE (TCLP METALS ONLY) SW846-1311 P106.1.0

Test: M620.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0050	mg/L
ADDITION 1	0.00100		mg/L
SAMPLE	0.000		Conc
SAMPLE + ADD 1	0.000906		Conc
DILUTION	1		

## Sample Comments

BDL Below Detection Limit

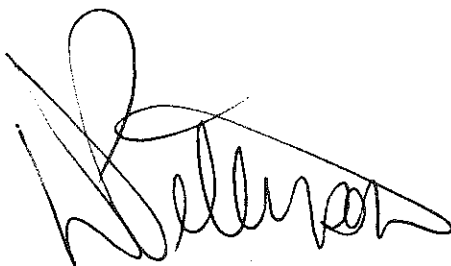
Sample chain of custody number 19601.



Sample Comments

*This Certificate shall not be reproduced, except in full,  
without the written approval of the lab.*

Quality Assurance Officer: \_\_\_\_\_

A handwritten signature in black ink, appearing to read 'W. Bellman', is written over a horizontal line.



**WASTE SAMPLING AND CHARACTERIZATION  
REPORT**

**HOOSIER SPLINE BROACH CORPORATION  
KOKOMO, INDIANA**

December 6, 1993

Prepared For:

Hoosier Spline Broach Corporation  
1401 Touby Pike  
Kokomo, Indiana 46903

Submitted By:

Science & Engineering Analysis Corporation  
P.O. Box 68178  
Indianapolis, Indiana 46268

Prepared By:

Johnie R. Baker  
Principal Engineer



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Science & Engineering Analysis Corporation (SEACOR) is submitting the following report on the waste sampling and characterization conducted at the Hoosier Spline Broach Corporation, located at 1401 Touby Pike in Kokomo, Indiana.

## 1.0 SCOPE OF WORK

The purpose of the project was to collect representative samples of the two wastestreams generated by Hoosier Spline Broach Corporation for analysis for TCLP chromium. The two wastestreams sampled were as follows.

### 1.0.1 Grinding Sludge from the Blanchard Machine

The first wastestream is grinding sludge from the Blanchard Machine, referred to on sample submission sheets as Wet Grinding Sludge. This grinding process involves a machine made by Blanchard, utilizing a abrasive grinding product in a wet process using water soluble coolant solution. The wetted grindings are allowed to dewater by gravity prior to being placed into 55-gallon drums. The metal grindings are accumulated into drums at the Blanchard Machine. The resulting dewatered grindings were moist from contact with the coolant, but did not exhibit any free liquids. The coolant recovered from the dewatering is accumulated for recycling or properly disposed of. This grinding sludge consists of fine to medium size particles and is grey in coloring.

### 1.0.2 Grinding Sludge from Dry Grinding Dust Collectors

The second wastestream is grinding sludge from machines using dust collection, referred to on sample submission sheets as Dry Grinding Sludge. This grinding sludge is generated from a dry grinding process of metal stock. The dust and grindings off this process are collected by a vacuum system which collects into a pair of silos which dispenses into two accumulation drums outside the building. This material is much finer in particle size than the Blanchard grinding sludge, grey in coloring, and very dry.



## 1.2 DESCRIPTION OF SAMPLE COLLECTION

All sampling for this project was conducted by Mr. Johnie R. Baker, Principal Engineer with SEACOR. Mr. Baker has over fifteen years experience assisting industry with the proper characterization of industrial wastestreams. A detailed resume of Mr. Baker is included in Appendix E. Wastestream sampling was conducted on the following dates in 1993: September 23rd , October 5th, October 14th, and October 20th.

### 1.2.1 Grinding Sludge from Blanchard Process

On each sampling date, a representative composite sample of the grinding sludge generated by the Blanchard Machine was collected from two accumulation drums. A composite sample was collected using a new polyethylene scoop, which had been completely rinsed with distilled water, by taking samples directly from each drum and compositing into two glass sample containers. The containers samples were mixed during sampling by vigorously shaking the sample container several times during sampling. Details of these samplings are included on the Sample Information Sheets in Appendix A. The samples were properly labeled and immediately iced down for shipment to Heritage Laboratories, Inc. A Chain-of-Custody form was completed on all samples. After each sampling, the accumulation drums were changed out and replaced with empty drums, so that subsequent samplings would be representative of new and different wastes from this process.

Prior to the sampling conducted on October 20, 1993, plant personnel had just completed the cleaning of the Blanchard Machine. This composite sample consisted of the typical grinding sludge as described earlier, plus the residual accumulated grinding sludges cleaned from the machine.

### 1.2.2 Grinding Sludge from Dry Grinding Process

On each sampling, a representative composite sample of the grinding sludge from the dry grinding process was collected from the two accumulation drums under the silos directly outside the building. A composite sample was collected using a new polyethylene scoop, which had been completely rinsed with distilled water, by taking samples directly from each drum and compositing into two glass sample containers. The containers samples were mixed during sampling by vigorously shaking the sample container several times during sampling. Details of these samplings are included on the Sample Information Sheets in Appendix A. The samples were properly labeled and immediately iced down for shipment to Heritage Laboratories, Inc. A Chain-of-Custody form was completed on all samples. After each sampling, the accumulation drums were changed out and replaced with empty drums, so that subsequent samplings would be representative of new and different wastes from this process.



### 1.3 SAMPLE ANALYSIS

All samples from this characterization project were submitted to Heritage Laboratories, Inc., located at 7901 West Morris Street in Indianapolis, Indiana. All containers were provided by Heritage Laboratories, Inc. Sample containers were properly labeled and chain-of-custody forms completed on all samples. All samples were iced down in coolers for transport to Heritage Laboratories, Inc. Samples were analyzed for TCLP Chromium using Methods SW 846-1311, SW 846-3010A, and SW 846-7190. The analytical results of these samples are summarized on Table 1 and Table 2.



**TABLE 1****GRINDING SLUDGE FROM BLANCHARD MACHINE  
TCLP CHROMIUM ANALYTICAL RESULTS**

<b>DATE</b>	<b>TIME</b>	<b>RESULT</b>	<b>DETECTION LIMIT</b>	<b>UNITS</b>
09/23/93	1:30 pm	0.50	0.050	mg/l
10/05/93	2:40 pm	0.94	0.050	mg/l
10/14/93	2:40 pm	0.25	0.050	mg/l
10/20/93	3:13 pm	0.054	0.050	mg/l

**TABLE 2****GRINDING SLUDGE FROM DRY GRINDING PROCESS  
TCLP CHROMIUM ANALYTICAL RESULTS**

<b>DATE</b>	<b>TIME</b>	<b>RESULT</b>	<b>DETECTION LIMIT</b>	<b>UNITS</b>
09/23/93	1:40 pm	0.20	0.050	mg/l
10/05/93	2:50 pm	0.12	0.050	mg/l
10/14/93	2:45 pm	0.18	0.050	mg/l
10/20/93	3:05 pm	0.12	0.050	mg/l



## 1.4 REVIEW AND CONCLUSIONS

SEACOR has investigated the processes generating each wastestream and has reviewed available data on the make-up of the metal stock for making the broaches and the water soluble coolants used in the Blanchard Machine process. These documents are included in Appendix D. Based on these material data sheets from the suppliers, SEACOR was not able to identify any potential sources of chromium in the water soluble coolants being used at the plant. As shown by the data provided by the metal stock provider, the total chromium content in the raw metal stock runs from 3.82 to 4.02 per cent. The resultant grindings will run in the same range for total chromium content. This chromium would be insoluble, unless it came in contact with a corrosive solution to solubilize the chromium. The Hoosier Spline Broach Corporation does not use any such corrosives in their operations.

Based upon the sampling conducted by SEACOR on the above dates, the analytical results indicate that the grinding sludge generated by the Blanchard Machine does not exhibit hazardous waste characteristic for chromium. The following RCRA Statistical Analysis was completed on this wastestream:

### Grinding Sludge from Blanchard Machine

Mean ( $\bar{x}$ ) = 0.436

Variance ( $s^2$ ) = 0.146

Standard Deviation ( $s$ ) = 0.382

Standard Error ( $s_{\bar{x}}$ ) = 0.191

High Confidence Interval = 0.749

Low Confidence Interval = 0.123

In addition, the analytical results indicate that the dry grinding sludge from dust collector system does not exhibit hazardous waste characteristic for chromium. The following RCRA Statistical Analysis was completed on this wastestream:

### Dry Grinding Sludge from Dust Collectors

Mean ( $\bar{x}$ ) = 0.155

Variance ( $s^2$ ) = 0.0017

Standard Deviation ( $s$ ) = 0.0412

Standard Error ( $s_{\bar{x}}$ ) = 0.0206

High Confidence Interval = 0.189

Low Confidence Interval = 0.121

In summary, the sampling and analysis conducted by SEACOR, noted above, indicated that the two wastestreams do not exhibit any hazardous waste characteristic for chromium (TCLP chromium).





**APPENDIX A \***

**SAMPLE SUBMISSION SHEET**

**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SITE INFORMATION SHEET

Sample No.'s: 9-23A - 9-23B Analyses Requested: TCLP Ch ONLY

Facility Name: HOOSIER SPLINE BROACH CORP. EPA I.D. No.: \_\_\_\_\_

Site Location (city, county, Long./Lat.): Kokomo, IN

Facility Type and Information (products, raw materials, etc.): \_\_\_\_\_

\* METAL GRINDING TO MAKE BROACHES FOR A VARIETY OF INDUSTRIES

Date: 23 SEPT. 93 Start Time: 1:15 p.m. End Time: 2:00 p.m.

Conditions: Sky CLOUDY Ground Wet Wind Slight Temp. 70° Precip. MISSING - NONE

Collectors: \_\_\_\_\_

Container	Total No.	Accepting Laboratory
1 L Plastic	_____	<u>HERITAGE LABORATORIES, INC.</u>
1 L Glass	_____	Address <u>7901 WEST MORRIS ST.</u>
500 ml Glass	<u>2</u>	City, State <u>Indianapolis IN 46231</u>
250 ml Plastic	_____	Contact <u>Kurt Maines</u> Phone <u>317-243-0811</u>
40 ml Vials	_____	Container Source <u>Heritage Laboratories, Inc.</u>
Amber Glass	<u>2</u>	
other _____		

Sample Iced? (YES) NO Preservatives Used? YES (NO)

Sample Types (circle):	Mon. Well	Res. Well	Mun. Well	Indus. Well
	Leachate	Creek	River	Ditch
	Lagoon	Lake	Pond	Sediment
	Soil	<u>(Sludge)</u>	Sand	Indus. Waste
	Solid	Oil	Other _____	

Sampling Plan (circle): grab/composite statistical/random/judgmental

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from drums of each wastestream. Drums were changed out after sampling.

Equipment is (circle): (dedicated)/decontaminated

Source of decon. water: N.A.

Source of trip/field blank reagent water: N.A.

Photos taken? YES (NO) No. of Photos: \_\_\_\_\_

Constituents expected: Ch

Approximate concentrations, worst case (circle):

< 10 ppm 100 ppm 1000 ppm 5% 10% > 15%

Handling Precautions Advised? YES NO

If yes, precautions: \_\_\_\_\_

Results Due By: \_\_\_\_/\_\_\_\_/\_\_\_\_ Signature: J. R. B.



# SEACOR

P.O. Box 68178  
Indianapolis, IN 46268

## SAMPLE INFORMATION SHEET

Facility Name: HOUSIER SPLINE BROACH CORP.; Kokomo, IN

Sample I.D.: WET GRINDING DUST Sample Control No.: A 291069

Sample Location: FROM BLANCHARD MACHINE OPERATION

Sample Date: 9 / 23 / 93 Time Sampled: 1 : 30 AM/PM (PM)

### Field Test(s)

Performed	Result
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

### Sample Types (circle all applicable):

Mon. Well	Res. Well	Mun. Well	Ind. Well
Leachate	Creek	River	Ditch
Lagoon	Lake	Pond	Sediment
Soil	<u>Sludge</u>	Sand	Ind. Waste
Solid	Oil	Other	_____
Blank (Equipment/Trip/Field)		Background	

Containers	No.
1 L plastic	_____
1 L glass	_____
500 ml glass	<u>1</u>
40 ml vial	_____
250 ml plastic	_____
1L amber glass	<u>1</u>
Other	_____

Preservatives	Lab/Lot No.
H <sub>2</sub> SO <sub>4</sub> (50%)	_____
HNO <sub>3</sub> (conc.)	_____
NaOH (50%)	_____
Zinc Acetate (2N)	_____
Other	_____

Sample Iced

No preservatives used  
for non-aqueous samples

### Additional Sample Location Information:

Sample was placed into clean sample containers provided by HERITAGE LABS; tightly sealed and properly labeled. Collected direct from drums next to Blanchard Machine.

### Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted of fine to medium sized grindings, grey in coloring with moisture from cutting solution.

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from 3 drums at the Blanchard Machine and placed into two sample containers.

Deviations from Sampling Plan: Drums were changed immediately after sampling to insure new waste would be sampled on Oct. 5th sampling.

Signature of Sampler: \_\_\_\_\_

J. R. Bel



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BEACH CORP.; Kokomo, IN

Sample I.D.: DRY GRINDING DUST Sample Control No.: A 291070

Sample Location: FROM DRY GRINDING OPERATIONS

Sample Date: 9 / 23 / 93 Time Sampled: 1 : 40 AM/PM (PM)

Field Test(s) Performed	Result	Sample Types (circle all applicable):			
		Mon. Well	Res. Well	Mun. Well	Ind. Well
		Leachate	Creek	River	Ditch
		Lagoon	Lake	Pond	Sediment
		Soil	Sludge	Sand	Ind. Waste
		Solid	Oil	Other	
		Blank (Equipment/Trip/Field)		Background	

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic		H <sub>2</sub> SO <sub>4</sub> (50%)	
1 L glass		HNO <sub>3</sub> (conc.)	
500 ml glass	1	NaOH (50%)	
40 ml vial		Zinc Acetate (2N)	
250 ml plastic		Other	
1L amber glass	1	Sample Iced	
Other		No preservatives used for non-aqueous samples	

Additional Sample Location Information:  
Samples collected from accumulation drum on dry vacuum system.

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):  
Sample consisted of grey-colored fine grinding dust; very dry & loose

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from two drums at the vacuum system & placed into 2 sample containers.

Deviations from Sampling Plan: \_\_\_\_\_

Signature of Sampler: Jodi R. Bal



# SEACOR

P.O. Box 68178  
Indianapolis, IN 46268

## SITE INFORMATION SHEET

Sample No.'s: 10-5A - 10-5B Analyses Requested: TCLP Cr ONLY

Facility Name: HOOSIER SPLINE BROACH CORP. EPA I.D. No.: \_\_\_\_\_  
Site Location (city, county, Long./Lat.): Kokomo, IN  
Facility Type and Information (products, raw materials, etc.): \_\_\_\_\_  
METAL GRINDING TO MAKE BROACHES FOR A VARIETY

Date: 10-5-93 Start Time: 2:30 P.M. End Time: 3:00 PM  
Conditions: Sky CLEAR Ground DRY Wind SLIGHT Temp. 68° Precip. NONE  
Collectors: Johnie R. Baker; SEACOR PROJ. ENGR.

Container	Total No.	Accepting Laboratory
1 L Plastic	_____	<u>HERITAGE LABORATORIES, INC.</u>
1 L Glass	_____	Address <u>7901 WEST MORRIS STREET</u>
500 ml Glass	<u>2</u>	City, State <u>Indpls., IN 46231</u>
250 ml Plastic	_____	Contact <u>KURT MAINES</u> Phone <u>317-243-0811</u>
40 ml Vials	_____	Container Source <u>HERITAGE LABORATORIES</u>
Amber Glass	<u>2</u>	
other	_____	

Sample Iced? YES NO Preservatives Used? YES (NO)

Sample Types (circle): Mon. Well Res. Well Mun. Well Indus. Well  
Leachate Creek River Ditch  
Lagoon Lake Pond Sediment  
Soil (Sludge) Sand Indus. Waste  
Solid Oil Other \_\_\_\_\_

Sampling Plan (circle): grab (composite) statistical/random/judgmental  
Sampling Equipment Used: A new polyethylene scoop was used on each sample and placed into a new sample container provided by HERITAGE LABS  
Equipment is (circle): (dedicated)/decontaminated  
Source of decon. water: N.A.  
Source of trip/field blank reagent water: N.A.

Photos taken? YES (NO) No. of Photos: \_\_\_\_\_

Constituents expected: Cr  
Approximate concentrations, worst case (circle):  
(10 ppm) 100 ppm 1000 ppm 5% 10% > 15%

Handling Precautions Advised? YES (NO)  
If yes, precautions: \_\_\_\_\_

Results Due By: \_\_\_\_/\_\_\_\_/\_\_\_\_ Signature: J. R. Baker



# SEACOR

P.O. Box 68178  
Indianapolis, IN 46268

## SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BROACH CORP.; KOKOMO, IN

Sample I.D.: WET GRINDING DUST Sample Control No.: 10-5A

Sample Location: FROM BLANCHARD MACHINE OPERATION

Sample Date: 10 / 5 / 93 Time Sampled: 2:40 AM/PM (PM)

Field Test(s) Performed	Result	Sample Types (circle all applicable):
		Mon. Well Res. Well Mun. Well Ind. Well
		Leachate Creek River Ditch
		Lagoon Lake Pond Sediment
		Soil <u>Sludge</u> Sand Ind. Waste
		Solid Oil Other
		Blank (Equipment/Trip/Field) Background

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic		H <sub>2</sub> SO <sub>4</sub> (50%)	
1 L glass		HNO <sub>3</sub> (conc.)	
500 ml glass	<u>1</u>	NaOH (50%)	
40 ml vial		Zinc Acetate (2N)	
250 ml plastic		Other	
1L amber glass	<u>1</u>	<u>Sample Iced</u>	
Other		No preservatives used for non-aqueous samples	

### Additional Sample Location Information:

DIRECT FROM DRUMS NEXT TO BLANCHARD MACHINE. Sample was placed  
into clean sample containers provided by HERITAGE LABS; tightly sealed  
and properly labeled.

### Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted of grey-colored, fine to medium sized grindings  
with moisture from cutting solutions

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite  
sample from 2 drums at the Blanchard Machine and placed into two sample containers

Deviations from Sampling Plan: Drums were changed immediately after sampling  
to insure new waste would be sampled on Oct. 11th.

Signature of Sampler: J. R. R.



# SEACOR

P.O. Box 68178  
Indianapolis, IN 46268

## SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BROACH CORP.; KOKOMO, IN

Sample I.D.: DRY GRINDING DUST Sample Control No.: 10-53

Sample Location: FROM DRY GRINDING OPERATION

Sample Date: 10 / 5 / 93 Time Sampled: 2 : 50 AM ☒ PM

Field Test(s) Performed	Result	Sample Types (circle all applicable):			
		Mon. Well	Res. Well	Mun. Well	Ind. Well
		Leachate	Creek	River	Ditch
		Lagoon	Lake	Pond	Sediment
		Soil	<u>Sludge</u>	Sand	Ind. Waste
		Solid	Oil	Other	
		Blank (Equipment/Trip/Field)		Background	

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic		H <sub>2</sub> SO <sub>4</sub> (50%)	
1 L glass		HNO <sub>3</sub> (conc.)	
500 ml glass	<u>1</u>	NaOH (50%)	
40 ml vial		Zinc Acetate (2N)	
250 ml plastic		Other	
1L amber glass	<u>1</u>	<u>Sample Iced</u>	
Other		No preservatives used for non-aqueous samples	

### Additional Sample Location Information:

Sample collected from accumulation drum on dry vacuum system

### Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted of grey-colored, fine grinding dust (very dry & loose)

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from the drum & placed into 2 sample containers.

Deviations from Sampling Plan: \_\_\_\_\_

Signature of Sampler: J. R. Bal



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SITE INFORMATION SHEET

Sample No.'s: 10-14 A - 10-14 B Analyses Requested: TCLP Cf ONLY

Facility Name: HOOSIER SPLINE BROACH CORP. EPA I.D. No.: \_\_\_\_\_

Site Location (city, county, Long./Lat.): KOKOMO, INDIANA

Facility Type and Information (products, raw materials, etc.): \_\_\_\_\_

\* METAL GRINDING/FABRICATION OF BROACHES FOR A WIDE VARIETY OF INDUSTRIES.

Date: 14 Oct. 93 Start Time: 2:30 PM End Time: 3:10 PM

Conditions: Sky P. Cloudy Ground Dry Wind Slight Temp. 62°F Precip. NONE

Collectors: \_\_\_\_\_

Container	Total No.	Accepting Laboratory <u>HERITAGE LABORATORIES, INC.</u>
1 L Plastic	_____	Address <u>7901 W. MORRIS STREET</u>
1 L Glass	_____	City, State <u>INDIANAPOLIS, IN</u> <u>46231</u>
500 ml Glass	<u>2</u>	Contact <u>KURT MAINES</u> Phone <u>317-243-0811</u>
250 ml Plastic	_____	
40 ml Vials	_____	Container Source <u>HERITAGE LABORATORIES, INC.</u>
Amber Glass	<u>2</u>	
other _____	_____	

Sample Iced? YES NO Preservatives Used? YES NO

Sample Types (circle):

Mon. Well	Res. Well	Mun. Well	Indus. Well
Leachate	Creek	River	Ditch
Lagoon	Lake	Pond	Sediment
Soil	<u>Sludge</u>	Sand	Indus. Waste
Solid	Oil	Other _____	

Sampling Plan (circle): grab/composite statistical/random/judgmental

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from drums of each wastestream. Drums were changed out after sampling.

Equipment is (circle): dedicated/decontaminated

Source of decon. water: N.A.

Source of trip/field blank reagent water: N.A.

Photos taken? YES NO No. of Photos: \_\_\_\_\_

Constituents expected: Chromium

Approximate concentrations, worst case (circle):

< 10 ppm      100 ppm      1000 ppm      5%      10%      > 15%

Handling Precautions Advised? YES NO

If yes, precautions: \_\_\_\_\_

Results Due By: \_\_\_\_/\_\_\_\_/\_\_\_\_ Signature: J. R. Bal



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SCLINE BRACH CORP.; KOKOMO, IN

Sample I.D.: WET GRINDING DUST Sample Control No.: 10-14 A

Sample Location: Direct from waste accumulation drums at Blanchard Machine Operation

Sample Date: 10 / 14 / 93 Time Sampled: 2 : 45 AM/PM (PM)

Field Test(s) Performed	Result	Sample Types (circle all applicable):			
		Mon. Well	Res. Well	Mun. Well	Ind. Well
		Leachate	Creek	River	Ditch
		Lagoon	Lake	Pond	Sediment
		Soil	<u>Sludge</u>	Sand	Ind. Waste
		Solid	Oil	Other	
		Blank (Equipment/Trip/Field)		Background	

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic		H <sub>2</sub> SO <sub>4</sub> (50%)	
1 L glass		HNO <sub>3</sub> (conc.)	
500 ml glass	<u>1</u>	NaOH (50%)	
40 ml vial		Zinc Acetate (2N)	
250 ml plastic		Other	
1L amber glass	<u>1</u>	<u>Sample Iced</u>	
Other		No preservatives used for non-aqueous samples	

Additional Sample Location Information:

Sample collected directly from waste accumulation drums at Blanchard Machine Operation.

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted of grey, fine to medium sized metal grindings with some moisture from cutting solution.

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from drum and bucket at the Blanchard Machine, and placed into new container.

Deviations from Sampling Plan: \_\_\_\_\_

Signature of Sampler: J. R. B. L.



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BROACH CORP.; Kokomo, IN  
Sample I.D.: DRY GRINDING DUST Sample Control No.: 10-14 B  
Sample Location: Direct from waste accumulation drums from dry grinding vacuum system  
Sample Date: 10 / 14 / 93 Time Sampled: 2 : 40 AM/PM (PM)

Field Test(s)		Sample Types (circle all applicable):			
Performed	Result	Mon. Well	Res. Well	Mun. Well	Ind. Well
		Leachate	Creek	River	Ditch
		Lagoon	Lake	Pond	Sediment
		Soil	<u>Sludge</u>	Sand	Ind. Waste
		Solid	Oil	Other	
		Blank (Equipment/Trip/Field)			Background

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic		H <sub>2</sub> SO <sub>4</sub> (50%)	
1 L glass		HNO <sub>3</sub> (conc.)	
500 ml glass	<u>1</u>	NaOH (50%)	
40 ml vial		Zinc Acetate (2N)	
250 ml plastic		Other	
1L amber glass	<u>1</u>	<u>Sample Iced</u>	
Other		No preservatives used for non-aqueous samples	

Additional Sample Location Information:

Sample collected directer from waste accumulation drums under dry vacuum system for dry grinding operations.

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted of grey colored, fine sized metal grinding dust, which was very dry and loose.

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from two drums at the vacuum system & placed into new container.

Deviations from Sampling Plan:

Signature of Sampler: J. R. Bell



# SEACOR

P.O. Box 68178  
Indianapolis, IN 46268

## SITE INFORMATION SHEET

Sample No.'s: 10-20A - 10-20B Analyses Requested: TCLP Cr ONLY

Facility Name: HOOSIER SPLINE BROACH CORP. EPA I.D. No.: \_\_\_\_\_  
Site Location (city, county, Long./Lat.): Kokomo, IN  
Facility Type and Information (products, raw materials, etc.): \_\_\_\_\_  
\* METAL GRINDING / FABRICATION TO MAKE BROACHES FOR A VARIETY OF INDUSTRIES

Date: 20 Oct. 93 Start Time: 2:50 p.m. End Time: 3:40 p.m.  
Conditions: Sky Cloudy Ground Wet Wind Slight Temp. 62°F Precip. Mist Rain  
Collectors: Johnie R. Baker, SEACOR PROJECT ENGINEER

Container	Total No.	Accepting Laboratory
1 L Plastic	_____	<u>HERITAGE LABORATORIES, INC.</u>
1 L Glass	_____	Address <u>7901 WEST MORRIS STREET</u>
500 ml Glass	_____	City, State <u>INDIANAPOLIS, IN 46231</u>
250 ml Plastic	_____	Contact <u>Kurt Maines</u> Phone <u>317-243-0811</u>
40 ml Vials	_____	Container Source <u>HERITAGE LABORATORIES, INC.</u>
Amber Glass	<u>2</u>	
other	_____	

Sample Iced? ☒ YES ☐ NO Preservatives Used? YES ☐ NO ☒

Sample Types (circle):

Mon. Well	Res. Well	Mun. Well	Indus. Well
Leachate	Creek	River	Ditch
Lagoon	Lake	Pond	Sediment
Soil	<u>Sludge</u>	Sand	Indus. Waste
Solid	Oil	Other	

Sampling Plan (circle): grab/composite statistical/random/judgmental  
Sampling Equipment Used: A new polyethylene scoop was used to collect 2 sample from drums of each wastestream. Drums are changed out after each sampling.  
Equipment is (circle): dedicated/decontaminated  
Source of decon. water: N.A.  
Source of trip/field blank reagent water: N.A.

Photos taken? YES ☐ NO ☒ No. of Photos: \_\_\_\_\_

Constituents expected: Cr  
Approximate concentrations, worst case (circle):  
< 10 ppm 100 ppm 1000 ppm 5% 10% > 15%

Handling Precautions Advised? YES ☐ NO ☐  
If yes, precautions: \_\_\_\_\_

Results Due By: \_\_\_\_/\_\_\_\_/\_\_\_\_ Signature: Johnie R. Baker



P.O. Box 68178  
Indianapolis, IN 46268

Facility Name: HOOSIER SPLINE BROACH CORP.; Kokomo, Indiana

Sample I.D.: WET GRINDING DUST      Sample Control No.: 10-20 A

Sample Location: FROM DRUMS GENERATED BY BLANCHARD MACHINE OPERATION

Sample Date: 10 / 20 / 93 Time Sampled: 3 : 13 AM/PM

Field Test(s)

Performed	Result
-----------	--------

Sample Types (circle all applicable):

Mon. Well Res. Well Mun. Well Ind. Well

Leachate Creek River Ditch

Location	Season	Depth	Depth
Lagoon	Lake	Pond	Sediment

Sludge	Sand	Ind. Waste
--------	------	------------

Solid	Oil	Other
-------	-----	-------

Blank	Equipment/Trip/Field	Background
-------	----------------------	------------

Containers	No.
------------	-----

1 L plastic

1 L glass

500 ml glass

40 ml vial

250 ml plastic

1L amber glass	1
----------------	---

Other

## Preservatives

H<sub>2</sub>SO<sub>4</sub> (50%)

HNO<sub>3</sub> (conc.)

NaOH (50%)

Zinc Acetate (2N)

Other \_\_\_\_\_

Sample Iced

No preservatives used  
for non-aqueous samples

Lab/Lot No.

Additional Sample Location Information:

Sample was placed into clean sample container provided by HERITAGE LABS. tightly sealed and properly labeled. Collected directly from drums at Blanchard Machine. Machine had just been cleaned and waste exhibited somewhat different consistency.

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted on a mixture of grey fine-medium sized metal grindings (as typical in prior samplings) and brown rusted clumps of metal grindings from the machine cleaning process. Materials had some moisture from cutting solution.

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite sample from 2 drums at the Blanchard Machine and placed into new sample container.

Deviations from Sampling Plan:

Signature of Sampler: J. R. Bld



**SEACOR**  
P.O. Box 68178  
Indianapolis, IN 46268

SAMPLE INFORMATION SHEET

Facility Name: HOOSIER SPLINE BROACH CORP.; Kokomo, Indiana

Sample I.D.: DRY GRINDING DUST Sample Control No.: 10-20B

Sample Location: FROM DRUMS OFF VACUUM SYSTEM FROM DRY GRINDING OPERATIONS

Sample Date: 10 / 20 / 93 Time Sampled: 3 : 05 AM/PM (PM)

Field Test(s)	Result	Sample Types (circle all applicable):			
Performed		Mon. Well	Res. Well	Mun. Well	Ind. Well
		Leachate	Creek	River	Ditch
		Lagoon	Lake	Pond	Sediment
		Soil	<u>Sludge</u>	Sand	Ind. Waste
		Solid	Oil	Other	
		Blank (Equipment/Trip/Field)		Background	

Containers	No.	Preservatives	Lab/Lot No.
1 L plastic		H <sub>2</sub> SO <sub>4</sub> (50%)	
1 L glass		HNO <sub>3</sub> (conc.)	
500 ml glass		NaOH (50%)	
40 ml vial		Zinc Acetate (2N)	
250 ml plastic		Other	
1L amber glass	<u>1</u>	<u>Sample Iced</u>	
Other		No preservatives used for non-aqueous samples	

Additional Sample Location Information:

Samples collected from accumulation drums under dry vacuum system  
for dry grinding operations.

Additional Sample Observations (e.g.: depth taken, color, odor, size, clarity, density, suspended solids, colloidal, etc.):

Sample consisted of grey fine-sized grinding dust; very dry & loose.

Sampling Equipment Used: A new polyethylene scoop was used to collect a composite  
sample from two drums at the vacuum system & placed into new sample container.

Deviations from Sampling Plan: \_\_\_\_\_

Signature of Sampler: Jodi R. Rol





**APPENDIX B**  
**CHAIN OF CUSTODY FORMS**

TO ENSURE PROPER HANDLING OF SAMPLES PLEASE COMPLETE THIS ENTIRE FORM

**HERITAGE LABORATORIES, INC.**

7901 West Morris Street

Indianapolis, Indiana 46231 (317) 243-0811 Fax (317) 486-5095

I - № 14997

[illegible]



TO ENSURE PROPER HANDLING OF SAMPLES PLEASE COMPLETE THIS ENTIRE FORM

# HERITAGE LABORATORIES, INC.

I - № 9051

7901 West Morris Street

Indianapolis, Indiana 46231 (317) 243-0811 Fax (317) 486-5095

[illegible]





TO ENSURE PROPER HANDLING OF SAMPLES PLEASE COMPLETE THIS ENTIRE FORM

# HERITAGE LABORATORIES, INC.

I - No 13053

7901 West Morris Street

Indianapolis, Indiana 46231 (317) 243-0811 Fax (317) 486-5095

Co. Name: <u>SEACOR - BARNES &amp; THORNBURG</u>		Analyses Requested (Note special detection limits or methods)		Report To:	
Project Name: <u>Hoosier Spine Broach Corp; Kokomo IN</u>				Co: <u>BARNES &amp; THORNBURG</u>	
Quote No.: <u>Z 11800</u> PO No.:				Add:	
ENVIRONMENTAL PROGRAM:				Attn: <u>MARCIE HORNWITZ</u>	
CWA NPDES IWP SLUDGE		Phone:		Accelerated Turnaround Requested (Subject to Additional Charge)	
RCRA MW SW DISPOSAL		Result Request by: <u>/</u>		Mo Day	
SDWA CERCLA/SUPERFUND OTHER		(Date must be Accepted and Approved by Lab.)			
Sampled by:		Sample Type (Matrix): DW, GW, WW, Soil, Oil, Sludge, Other		No. of Containers	
Sample ID:	Date:	Time:	Comp	Grab	Sample Description:
10-14 B	10-14-93	2:40 PM	✓	✓	DRY GRINDING DUST
10-14 A	10-14-93	2:45 PM	✓	✓	WET GRINDING DUST
Relinquished by: (Signature) <u>[Signature]</u> Date / Time <u>10-14-93 / 7:40 PM</u> Received by: (Signature) _____					
Relinquished by: (Signature) _____ Date / Time <u>/</u> Received by: (Signature) _____					
Relinquished by: (Signature) _____ Date / Time <u>/</u> Received for Lab by: (Signature) <u>[Signature]</u> Date / Time <u>10/14/93 7:40 PM</u> Remarks: <u>CUSTODY SEAL BROKEN AT LAB BY ANDY HUSCHER</u>					

Distribution: White original to be retained by client, Yellow copy to accompany sample to laboratory, Pink copy to also be retained by client.



TO ENSURE PROPER HANDLING OF SAMPLES PLEASE COMPLETE THIS ENTIRE FORM

# HERITAGE LABORATORIES, INC.

I - № 13055

7901 West Morris Street

Indianapolis, Indiana 46231 (317) 243-0811 Fax (317) 486-5095

[illegible]

